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ASPECTS TO CONSIDER WHEN SEARCHING FOR PERSUASIVE STRATEGIES IN TOURISM DISCOURSE

GANNA ZAKHAROVA

Abstract. Tourism as a social phenomenon has attracted the attention of marketers throughout all stages of its development. Successful cooperation between tourism entities and customers is based on communication. The persuasive power of advertising language is very much experienced today. The same happens in relation to tourism marketing materials. In fact, in order to attract the attention of the viewers, the travel companies choose various signs to express their notion of the brand. Hence, there exist different approaches in tourism marketing to attract and convince potential tourists to book a tourism product. The present article elucidates and discusses important aspects in relation to the language of tourism and the ways of its analysis for detecting persuasive techniques that are used to allure potential tourists. In this regard, the speech impact on travel advertising is realized by convincing a potential customer of the need for service / product. When advertising a travel product, the advertiser influences the consumer, attracting various effective means to intensify his desire to purchase travel services (travel product). The paper reviews the elements of persuasive tourism marketing such as structured communication, storytelling, copywriting, neuromarketing; Cialdini' (2001) persuasion techniques to influence people, namely, reciprocation, commitment and consistency, social proof, liking, authority, and scarcity. The article also highlights gender-targeting factors as important components in selecting an appropriate persuasive strategy when designing tourism promotional materials. The result section provides the real examples of deployment of the mentioned strategies in influencing the audience by the websites of "Karpaty" and "Solva" resorts. All these techniques form a theoretical framework for researches on persuasiveness and are worth attention as they play a main role in promotion of any kind. The data collection of this study will provide updated information in relation to rhetoric of tourism.

Keywords: tourism, persuasion, advertising, promotion, discourse, language, techniques, marketing.

JEL Classification: Z13; Z39.

1. INTRODUCTION

Nowadays, tourism industry is one of the biggest industries in the world. It is presently one of the fastest growing economic sectors. Since tourism involves the greatest people movement and is one of the largest economic activities in the world, hence it has become a popular focus of research. As a multidiscipline, tourism is also one of the exited research areas, in particular its language. Unlike other industries, tourism is an information-intensive business, therefore the discourse of tourism mediates the relationship between tourist and destination by manipulating various kinds of linguistic, visual, audio, and audio-visual resources to persuade potential consumers and convert them into actual clients [1]. The language of tourism is a highly specialized discourse which has its own established practices and characteristics.

Tourism promotion is an essential source of information for the potential tourists. The main goal of tourism advertisements is to portray the beautifulness and uniqueness of a certain place. Tourism promotion engages people in decision-making concerning the destination they would like to travel to [2]. Advertisement gives significance to the things, that is trying to sell emotions, sensations and experiences that travellers look for. Moreover, promotion allows to a destination to differentiate to the others and build its own identity. Advertisement allows positioning a destination in the tourist mind. The function of all of them is to make all the possible efforts in order to try to make the would-be customer to become a real tourist.

Potential tourists are not able to test-drive a destination before purchase, which results in an inherent uncertainty for the tourists. In other words, a holiday is not something we can check beforehand, and thus, promotion is the product and plays a bigger role in leisure and tourism than in any other market. The consumer buys a holiday, purely on the basis of symbolic expectations established promotionally through words, pictures, sounds or promises [3].

Preliminary results indicate that the search for the ideal touristic destination, the desire to go and experience new places is supported both by strategic, persuasive language and by technological choices used in tourism promotion [4]. Contexts have to be selected in order to persuade potential tourists to choose the product or service advertised. Hence, representations are important in designing tourism texts to be turned into objects of tourist consumption.

With such vast competition, the promoter needs to demonstrate the uniqueness of their product using effective discourse techniques. Therefore, language of tourism is described as rhetoric since it implies the power of speaker over the addressee. For this reason, the art of persuasive speaking and writing is of paramount importance in tourism industry. Advertising discourse is persuasive because the intention of any kind of advertising is to touch the target market and make that market aware of the excellent characteristics that a product can offer. Tourism discourse is highly persuasive because its ultimate purpose is to sell a product by describing a reality which has to be perceived by potential tourists as authentic and which can give them the illusion of really living an "off-the-beaten-track" holiday experience [5, p. 21].

2. THEORETICAL BACKGROUND

Advertising and promotion are two words frequently used nowadays. They are closely related and in a continuous expansion. Both of them are expensive but at the same time money generating. More than often the choice of a holiday depends on how well it was advertised or how persuasive or even manipulative the message was. Advertising does not only influence a potential visitor's initial choices but it also influences perception and length of stay, which is an important bonus for any advertiser. Consumers do not buy products or services, but the expectation of benefits that satisfy needs. To reach desired advertising responses, it's important to design advertisements that match these needs [6].

The challenge for tourism marketers is to stand out and create advertisements that can penetrate through the clutter and get the attention they deserve. Furthermore, the growth in the number of tourist destinations around the world has resulted in a similar product offer by different destinations. Arguably, each destination today claims to have luxury accommodations, unique attractions, friendly people and so on, and it becomes increasingly difficult for a destination to compete merely on the grounds of its functional characteristics. Therefore, the knowledge on effective advertising in tourism is not just important, it is crucial in this business.

In this globalized world, one of the important aspects to consider when promoting and advertising a new product, whether it is in the tourism industry or in any other field, is the packaging of the product. The way of presenting a product is important in attracting new customers. The expansion of tourism around the globe has created new and major questions for destination marketing. An increasing tourist activity and a growing number of tourist destinations have resulted in a complex and highly competitive global marketplace in which destinations compete for the attention of potential tourists. An outcome of this situation is the need to create an efficient positioning strategy. A destination should be favourably differentiated from other destinations in order to receive a place on potential tourists' "shopping list" [7]. With such vast competition, the promoter needs to demonstrate the uniqueness of their product.

To convince potential tourists to visit a particular place, marketing practitioners have to create an appealing imagery of a place that would stand out from the other competing destinations and would fit the needs and interests of a target market. Similar to tourism industry, the most important component in this business is to create the desirable image in tourists' mind. However, the product in the tourism business is destination, it is therefore crucial for this industry to create and manage destination image that suits effective marketing strategy.

Hence, the communication of a desirable and realistic image of the tourism destination to potential tourists is predominant, as nothing will convince potential tourists to visit a destination unless they possess a desirable image of that destination, and unless the marketing process is successful in attracting tourists through the creation of such images. Before tourists choose a destination, they need to have some information about destination and have the interest to go there. Therefore, destination marketers have to create a positive destination's image. Knowing how people judge space and place, and upon which criteria they base these judgments, is extremely important for tourism marketers.

Therefore, promotional texts for destinations are not created by accident, but they follow a specific and specialized language. Tourism discourse is a type of specialized discourse typically characterized by stylistic choices and different strategies of persuasion [8; 9]. The persuasive power of language is very much experienced both in printed and visual tourism media advertisements. Usually, marketers only speak in positive terms of the services and attractions they seek to promote, they use. Whatever communication medium is used, the language of tourism is one of persuasion and seduction, merging macro-economic goals with attributed individual need satisfactions [10]. Marketers rely on powerful discourses, shaping world-views of each destination. Before setting foot on certain soil, tourists already have a mental image of what it will look like. Without seducing imaginaries, there probably would be very little tourism at all.

Advertisers often use rhetorical devices, techniques and strategies to achieve their goals of moving their audiences and/or changing their attitudes. Through the tools of persuasion, verbal messages deliberately intend to affect the hearts and minds of the audience. Manipulation of language is highly used in style, grammar, and word selection to affect the audience. Clarity is the most important in this discourse based on simplicity in language [11]. The persuasive functions are expressed not only through the lexical and syntactic means, but also by using pictures, photos, symbols, etc., that is, non-linguistic or non-verbal elements. Tourism information, usually a combination of linguistic and supporting visual elements, creates, codifies, and communicates certain mythical experiences [12].

In terms of internet commerce, persuasive marketing includes how a web page is designed. Applying human psychology to web design, focusing on the part of the decision-making process that is not consciously controlled, elements such as layout, copy, and typography, combined with the right promotional messages, encourage website visitors to follow pre-planned pathways on the website, and take specific actions, rather than giving them free reign of choice in how they interact with the website. An e-commerce websites want to convert visits to sales, and persuasive marketing techniques ease that process.

There are four primary elements of persuasive tourism marketing: structured communication, storytelling, copywriting, and neuromarketing [13]. Structured communication is an important component in promotion, an author has to plan his/her communication in order to control the flow of information prepared to targeted audience. The goal of this technique is to guide the user of website through messages to a call-to-action section. In website design, it means that the first page the customer sees does not immediately seek a sale, but instead presents the initial message and encourages further exploration of the website.

Storytelling is about a narrative framework. It invokes invoke a customer’s emotional and subconscious responses. Author can use different stratagies in order to provide a story, it may be particular words, images, or even videos. It will evoke habitual emotional responses, such as affection, familiarity, empathy, or desire

Storytelling has become an integral part of communication strategies in the tourism industry in order to promote and differentiate destination brands. Applying storytelling techniques create a wonderful story that can convince, persuade and inspire audience to purchase product or service or visit destination. Employees, product and service are all part of the story. That is why storytelling is so important.

Storytelling is one of the most used marketing strategies, especially in travel business. Tour operators use storytelling to attract tourists and travellers and to get them to book their tours. They use storytelling to inform their clients about the location/country, tour guides, cuisine and specific customs and culture. This is what travellers are passionate about and care for the most. Stories motivate people, they make ideas stick and help persuade them. Narratives of a place constitute an element of global discourse where themes connected with tourism merge with topics related to cultural, social and political life, constructing a preferred version of tale about vacation and recreating myths inherent in the experience of travel [14; 10]. So, tour operators use storytelling to help them with that, which inevitably leads to more bookings.

Demand for visual content is on the rise and the trend is likely to continue. Storytelling with visual elements creates something that humans want to interact with. Great visuals, photos and videos provide the possibility for an instant transmission into beautiful reality. As much as people like hearing stories, they want you to show, especially when booking a trip. This trend is especially true in the travel industry, where images are key to giving travelers a preview of destinations and tours. Visual storytelling in adventure tourism is crucial. It is one of the most important pieces in trying to get people interested in a region [15].

Copywriting stands for the usage of right words and phrases for headings, captions, product descriptions, and other texts. There are various verbal techniques that can be chosen by the marketers to capture the attention of reader.

Neuromarketing is the most important component of persuasion marketing, applying psychology to the marketing message. In terms of website design, it means using colour scheme, effective messages, or particular visual imagery to improve visitors’ response to the website. The major feature in persuasion marketing is testimony from other people. Businesses typically display customer testimony on their websites, developing a “wall of social proof” approach. Businesses post photos of happy and attractive customers, so new customers are comfortable being associated with them [13].

Due to the growth of smartphone usage among the world’s population, we live in a world where the general public are reviewers, videographers, photographers and publishers. In this fast-paced, digitally-run world, attention-spans can be snapped away with the click of a fingers. People are able to review a service or activity right at the moment of a tour. Opinions provided by other customers, who have already used a product or service, are more reliable source for information these days. These can be any form of content, such as images, videos, or text.

Gone are the days when people used to turn to Lonely Planet for a hotel review, or the lifestyle section of a newspaper for a restaurant review. Nowadays people turn to online reviews when doing research on a product or service. More and more people search for reviews before purchasing. Potential customers are increasingly using peer-to-peer reviews and online sources to help them make a decision before they book. When tourists look for an accommodation in a city they visit or want to find a nice new restaurant to have dinner with friends, they read reviews beforehand. These reviews are more *real* than those by a professional critic. Tourists contribute to the tourism language through communicating their experiences. Feedback is a main tool for rating hotels, accommodation and amenities [16]. Reviews will help them make that choice, subsequently increasing a conversion rate at the same time. By having reviews on a website, a tourism destination has a better chance of ranking for these search terms.

The marketers use feedback technique to help people change their attitudes or behaviours. Customer feedback is considered to be the best tool of marketing for a travel company. Today's marketing is heavily based on experiences people have with products, services and brands. Customer testimonials are great for building trust. A satisfied customer affirming the performance, quality and value of a product or a service has a very strong influence on the potential customers. User-created feedback is rapidly gaining traction as an input into the consumer purchase decision-making process [15] as well as a driver for destination management strategies [17]Carvao S. Therefore, tourists' reviews can represent a significant source of information for tourism destinations in order to evaluate their reputation and performance [18] and consequently can turn into the persuasive and convincing elements of tourism destination promotion.

Based on his field observations, an eminent social psychologist Robert Cialdini proposes six persuasion techniques to influence people, namely, reciprocation, commitment and consistency, social proof, liking, authority, and scarcity [19]. These techniques are clearly observed in tourism promotional texts. He explains that once persuaded, human may react automatically without conscious thought. Reciprocation, commitment and consistency are techniques that can initiate communication and build relationship between tourist destination and the customers. Credibility and confidence can be triggered with authority and social proof techniques. At the same time, liking and scarcity techniques help to trigger consumers' emotion, interest, or attention [20].

Reciprocation is about giving something or doing a favour to a customer without expecting anything in return. However, in the end, the customer will feel obligated to repay the favour. This situation creates a form of relationship between tourism destination and customer. In the case of selling, offering an in-store sample can make a customer feels obligated to make a purchase. For example, tourism websites may be able to offer complimentary gifts to attract potential customers.

Commitment and consistency technique lies in the fact that customers are bound to make a decision based on previous commitment and they are consistent with what they think and do. Past actions usually reflect on the next one. For example, a customer has the chance to describe a product criterion. The seller will then present a few suitable products. In return, the customer feels obligated to buy at least one of the offered products. This is due to human having some kind of an obsessive desire to be (and to appear) consistent in what they think and do. Thus, tourism websites should allow customers to request for information, and consequently, persuading them to remain on the site would be much easier. Hence, "search" tool is important to allow customers to seek for much needed information about the destination, attraction, hotel, and flight availability. This information must be properly arranged so that the website can be seen as a one stop solution centre, and no further visit to other website is required.

People love to imitate others and when they become uncertain, they will usually take cues from others. Thus, providing evidence of what others are doing and how they do it, can serve as a *social proof* that it is worth to be imitated, and hence influence the users to repeat the same actions. In tourism websites, providing evidence that other people had travelled to interesting places, can lead to persuasion. This technique works better if the person is someone close to the targeted customer. According to TRAVELSAT© (2011), 38% of travellers admit that they mostly listen to other people's reviews of a destination [20]. This technique is directly related to neuromarketing techniques previously discussed.

Tourism texts must provide favourable and relevant images. Customers usually imagine what a destination is like using bits of information or images that they have viewed. Once they form a solid expectation of the place, the mental images will then help them decide. In order to assist customers to create positive mental images, a good approach is to design a text that can encourage their *liking*. Tangibility is one of the most significant factors of emotional design and helps to increase the level of liking and interest. Effective and well-designed visuals that can be clicked, resized, or manipulated can help form a bond or relationship between the customers and the visual interfaces. Therefore, tourism websites should not only follow the standard of user interface design guidelines, but also improve on the interactivity of the interface in order to improve the website's persuasiveness. The liking technique can also be facilitated by providing happy images or messages. An image of a family chatting happily while enjoying their dinner at a riverside restaurant can be a good trigger.

People tend to obey (or copy) authoritative figures. Sources of *authority* can be generic; it can be a leader of an organization, celebrities, or even materials such as uniform, money or food. In the health domain, for example, messages from somebody wearing a doctor's uniform will be regarded as important. In tourism, celebrities can play their part to promote destinations. Words of a well-known international celebrity chef being at a place with wonderful cuisines can draw much more attention than just an image of an unknown figure. This technique also works even though the celebrity figure is not an expert in the domain.

Scarcity is one of the most popular techniques used in advertising. Perceived scarcity will generate demand. For example, saying that offers are available for a "limited time only" or "limited stock only" can trigger or instigate customers' awareness that they must act fast, and hence encourages sales. In tourism advertising, this technique can be easily incorporated into the text design.

When discussing the persuasive strategies in tourism promotional materials, *gender* is a significant factor to consider. Gender is an important element in shaping consumer behaviour. Gender is significantly linked to different consumer variables such as leisure activities and preferences including tourism destination choices. As Aitchison [21] posits holiday experience can be evaluated as a process, wherein gender relations are "constructed, legitimated, reproduced and reworked", gender differences are an important aspect for tourist destination. It has been shown that travel plans between genders can differ. Males and females have different wants and thoughts [26]. Therefore, information on holiday destinations may be processed differently and needs to be presented differently to each gender. Females are likely to process all information comprehensively whereas males are likely to be influenced by selected attributes.

Gender differences in tourism behaviour have been found to be related to factors involved in destination choice, with women paying more attention to the issues of security, reliability, and social benefits than men [22]. Men are more likely to choose a destination based on the sporting and action-adventure activities available, whereas women are likely to choose a destination based on the culture, healthcare, and security of the place. Research has shown that more women than men are more likely to travel for leisure purposes; however women have tended to feel that there are limitations affecting access to tourism, with factors of physical, social and family constraints creating barriers that may discourage women in participating in leisure activities.

As gender is a functional factor in tourism marketing, therefore, marketers recognise that there are gender differences in information processing when designing tourism destination materials. They resort to the strategies that encourage and influence positive ideals of tourism to both genders. Perceptual, preference and attitudinal gender differences influence how marketers present destination information to holiday decision makers. Important attributes for ideal holiday destinations for one gender are not the same as for the other. Therefore, the tourism marketers consider targeting males and females differently when presenting information on tourism destinations [23].

3. Research Objective, Methodology and Data

As all languages have to be learned, the language of tourism, too, requires a process of socialization for those who generate it. For better understanding and analysing tourism information from the persuasive point of view, it is more than important to consider some aspects which almost each tourism text involves to create persuasive unit. Paying attention to these details will give an opportunity to look at the nature of tourism advertising and realise where this persuasive effect come from.

Often called "loaded language" [24] the language of tourism advertising aims to inform, persuade, sell thus changing people's opinions, choices and points of view. In this case, promotional texts for destinations cannot be created by accident, but they follow a specific and specialized language.

Therefore, due to the multimodality of the language of tourism, techniques of different types are employed to attract the potential clients.

The purpose of this paper is to offer a general view on the different components of this type of discourse in order to better understand its main persuasive features. I will undertake an explanatory study from which we will see examples of the use of these techniques, in tourism promotional material with the intention of persuading. I will consider the strategies deployed by the websites of "Karpaty" hotel and resort and recreation-therapeutical complex "Solva Resort & SPA" accessed from https://san-karpaty.com/ and http://solvahotel.com/en/ in order to encourage visitors to choose these places as their travel destination. The selection of these websites is purposeful. All of them officially represent health tourism and describe their varied tourism locations, healthcare services, nature attraction, and culture in an attractive language. The data compiled was taken during 2019-2020.

The previously discussed techniques, namely, structured communication, storytelling, copywriting, neuromarketing; Cialdini' (2001) persuasion techniques to influence people, namely, reciprocation, commitment and consistency, social proof, liking, authority, and scarcity, will be considered in the analysis of two corpuses. Each technique will be discussed that contribute to the persuasive effects and shape consumers' attitudes and evaluation towards the services and ultimately influence their purchase decision.

In doing so, this paper draws on various theories, approaches and methods to discourse analysis. In order to obtain more insight into persuasive techniques, different studies are combined in a multi-method analysis of the tourism texts. I will identify the most evident tools used to enhance the tourist experience during the search phase, prior to the travel. Any single use of theories to analyze the tourism discourse would be inadequate, less comprehensive and would not give a complete view on the strategies used in order to persuade.

Thus, a closer look at the techniques will help us understand the way the discourse of tourism operates and its role in tourism promotional documents. The research aims to present how semiotics acts effectively realize the real business purpose. I will investigate how different elements adopted in the tourism promotional materials construct the persuasive discourses of tourism. Hence, this paper will look at how tourism advertising, from different perspectives, depends on certain elements in order to promote a break away from everyday life.

This paper contributes to the field of tourism studies by focusing on the concept of persuasion and on how persuasion is activated in tourism communication. In particular, the aim is to understand what ways of communication can be considered as persuasive ones. The results of this study could be helpful for those who design tourism websites or create tourism promotional materials.

4. RESULTS AND DISCUSSION

1. *Structured communication.* Focusing on the global view of two websites, one can notice that they provide a meaning path through the sections of the sites that guides the viewer to taking action, the main goal of the sites. There is a coherent balance of power among different elements making up the websites layout. The designers visually prioritize key elements. The most important information is the biggest on the page and demand the most attention. Visual tension is created through colour contrasts and graphics that certainly contribute to the sites' design. The navigation bar is placed in a prominent location so it is easy to find. Each menu item acts as a jumping point to the various pages that help visitors learn more and convert.

The designer engages the viewer by figuring out where to take the next step. The viewer is guided to discover information on the location of the resort, rest, treatment, accommodations, nutrition, and other services in this institution, to view the customer testimonials, related articles on the latest news, and prices with special offers. These content is clear and concise. The goal of it is to convince the visitors to stay longer to further investigate what is offered. These messages are illustrated through images, written text and videos that guide the user toward conversion. Creating coherence between these elements, the authors organise them into a meaningful whole. Finally, the sites present call-to-action areas and buttons, namely, the contact details section and online booking form. They are the most important element on the sites and all efforts are focused on getting people to click through.

2. *Storytelling*. The sites are abundant with photographs. The verbal texts are compact and fulfil accompanying functions of description and commentary. The videos are used to demonstrate experiences in action. These modes create and manage a wealth of information and meaning potential in the websites, communicating emotion, setting a mood and delivering a message in the form of story. The elements within each category come together providing complete information on the topic of the section. Thus, the viewers have an impression that is a complete narrative.

From the perspective of narrative process, the pictures featuring in Feagure1 adopt invisible vectors formed by the depicted medical staff that mean motion. The viewer can perceive the action processes realized by them. The personnel is presented as trained experts which are on hand with anything the clients need to help them relax and unwind and get professional treatment. The actual healthcare pictures can help users contextualize and better understand what this establishment can help them accomplish. Hence, the viewer can visualize a story on how he/she could be treated in this establishment.

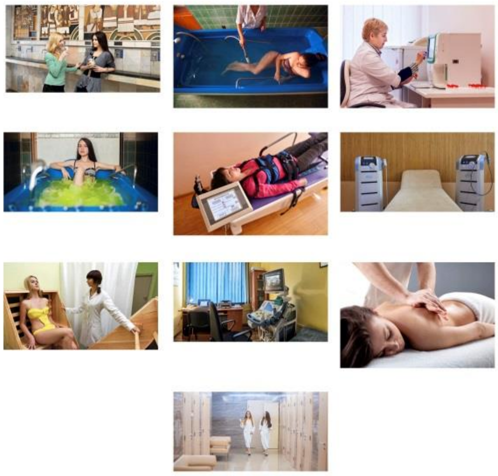

Fig. 1. Photos of medical facilities of the hotel resort "Karpaty". Source: developed by the author.

The last image in Figure 1 captured two women, and as it is a final image, the viewer understands that they have already experienced the treatment. Despite the language and cultural barriers, the photo conveys a sense of rapport and connection between the participants. The photo features content facial characteristics of represented participants and is positively received by users. Through these sequence of photos, the viewer receives a story of successful treatment. Therefore, the images are able to activate affective responses of pleasure and transmit the meaning that, being in this health resort establishment, the visitors can optimally combine treatment and recreation, as well as recover their power and feel harmony of soul and body, bring joy back into their life.

3. *Copywriting*. Both websites present verbal messages composed by many strategies whose objective is to present the beauty, attractiveness, and uniqueness of the tourism products. As the analysis has demonstrated, verbal items have been accurately selected to create appealing and convincing information. The most recurrent linguistic technique employed in the websites is the use of nouns and positive adjectives. The keyword analysis showed that the most recurring nouns and adjectives refer to specific "healthcare" elements creating the register of health tourism. The main key word of both websites is "treatment". It is constantly repeated in the corpuses to bring a positive feeling to patients that seek solutions for their health disorders. The adjectives are expressive, persuasive, convincing. The positive and recurrent terms, such as "therapeutic" and "healing", are presenting the resorts as the places where all the conditions are created to improve the visitors' health.

The present simple dominates the texts, and there is a large presence of modals that express possibility. The present is the tense used to convey the idea that something is true. Frequently used modal verb "can" seems to express an invitation. Disguised imperatives stand for attempts to persuade, recommend, urge, and finally get action from the potential tourist. Using the conditionals, the authors want to make a suggestion to the reader and to highlight the idea that these places can make wish come true.

4. *Neuromarketing.* The website of "Karpaty" resort strategically uses feedback areas showing how trustworthy their product is. The website involves their clients as co-producers of the content. It must be considered that tourists are both consumers and the producers of the content, making it highly influential. Moreover, the website provides a separate section for the images of customers along with their testimonials. These customers are famous people. The author gives the names of these people and some quotes from them that are their success experiences and testimonials. The smiles on their faces leave an impression of happiness. The symbolic message is that they are the satisfied clients. The positive attitude of an influential person toward a place can be more appealing for tourists.

5. *Reciprocation.* Facilitating a communication and interaction with potential customers within websites' environment, the producers design reciprocation, the situation that creates a form of relationship between the site and the customer. The main step in this technique is the accessible searching tool (navigation bar) that initiates communication. The instant personalisation features are perceived in the texts through the interactive personal pronoun "you" and addressing the viewer with a direct gaze in the visuals. These techniques were utilized frequently in the corpuses, revealing that the websites aimed to establish a higher degree of interactivity with the reader. The viewer is invited to interact as imaginary relation is established with him/her. This situation makes a customer feel obligated to make a purchase.

6. *Commitment and consistency.* Both websites allow users to search for needed information about the destinations and their attractions. The sites are interactive and well organized for excellent user experience. The contents on the sites are successfully grouped and linked in order to navigate from one page to another. There are different user interface components that help visitors find information and encourage them to take desirable actions. The navigations feel like an invisible hand that helps users find their way around the website. Implementing such a good internal linking strategy helps with a good flow of information within the domain allowing the tourist to become well informed about the places. Therefore, users will want to spend more time, increasing the dwell-time on it. The information is properly arranged so the websites seem to be a one stop solution centre, and no further visit to other website is required.

7. *Social proof.* The websites show signs of social proof; however, "Karpaty" resort makes more use of this technique. "Solva" resort shows limited representation of social proof. Both websites pay attention to improve the customer's level of trust. The websites gain the trust of potential customers through the photos of a high modality featuring experienced stuff and satisfied customers. The concept of modality is related to the reliability of the message, since visuals can precisely represent everything. Hence, high modality concerns with the representation of truth, certainty, credibility, and reliability. Providing evidence of what others are doing and how they do it, can serve as a social proof that it is worth to be imitated, and hence influence the users to repeat the same actions. The visually represented participants wearing doctor's uniforms are regarded as important component for enhancing trust and confidence.

8. *Liking.* The sufficient use of liking has also demonstrated that triggering customers' attention is important. Liking technique helps to generate the consumers' emotion, interest, and attention. The dream-like atmosphere is created by both website through a number of techniques. The websites present complex compositional structures that feature the resorts' amenities and services in a very attractive way for the viewer. The verbal items have been accurately selected. They create only positive images in the readers through various techniques. They do not only send a message or some information, but also attempt to persuade and even manipulate the reader. The visuals feature only

pleasant scenes evoking only positive emotions. And finally, the cohesion between the linguistic and visual elements provides favourable mental images in the users of websites that will help them decide.

9. *Authority.* The site of "Karpary" resort provides a separate section featuring the medical staff of destination. The viewers see professionals that they can trust and feel comfortable with. Using real photos of the resort's employees adds credibility to this resort complex. By providing the section showing the scans of various certificates obtained by "Karpaty" institution, the author wants to confirm certain characteristics of organization positively and associate the resort with external parties. These documents can be considered as trust indicators, as such professional accreditation build confidence by certifying a qualification. Embedding this section into the site can boost credibility and trustworthiness.

10. *Scarcity.* The scarcity technique is only incorporated into "Karpaty" website design. Providing the price reduction for a certain period of time, the resort instigates customers' awareness that they must act fast, and hence encourages sales. The adoption of this technique that makes use of numerals generates demand.

11. Gender targeting. Through different voices, the authors project the images of the resorts to the external audience. The websites sets up connections between certain types of people and certain types of services depicted on them. It means that there are sections for specific audiences. The communication targets both male and female audiences. The activities depicted on the websites are suitable for any gender. Moreover, both are considered to have medical needs. The author pays much attention to the fact that women are more involved in the holiday decision-making process and provide expanded information about the destination. Women are more reserved with their decisions and collect as much information as possible before making decisions. They usually gather the information in advance and then pick several options from which the joint decision can be made with the group. In this case, "Karpaty" website provides the section "Karpaty is the first in the list of the best sanatoriums of Truskavets" and section "Benefits" with all the linguistic and visual arguments (messages) of being the best. Moreover, the section "Benefits" contains slogan "Two times better sanatorium of Truskavets, Morshyn, Skhidnytsia!" to exert a kind of emotional manipulation on the potential tourists by encoding the clear message within this slogan.

The factors, such as security, reliability, culture elements depicted on the sites are very important and attractive for women. These issues are typical for a female-targeted promotion. They are likely to choose this destination based on these attributes. The sporting and action-adventure activities available on the sites are very appealing for a male audience, yet these sections address both genders. Throughout the samples, the majority of leisure images featured females. The stereotypical images of women are used to influence decisions of male audiences. The images are used to encourage men to travel more for leisure purposes, as more women than men travel for leisure holidays.

5. CONCLUSIONS

Tourism has gained a prominent position in international business markets, and the constant flow of information to promote destinations and attract potential clients is one of the most sensitive and strategic keys to success. In other words, tourism industry owes much of its success to the way tourist destinations are advertised, that is, to the content of tourism promotional texts. For this reason, the language of tourism is of paramount importance.

The communication of a desirable and realistic image of the tourism destination to potential tourists is predominant, as nothing will convince potential tourists to visit a destination unless they possess a desirable image of that destination, and unless the marketing process is successful in attracting tourists through the creation of such images. Hence, the advertisements make use of a wide range of techniques to attain their ultimate goal: persuade and eventually sell. More than often, good advertising techniques are the fine line between success and failure.

The present article has detected the strategies of tourism persuasive language basing on the theories, such as structured communication, storytelling, copywriting, neuromarketing; Cialdini' (2001) persuasion techniques to influence people, namely, reciprocation, commitment and consistency, social proof, liking, authority, and scarcity. Both corpuses under analysis have shown how they heavily rely on a number of textual elements that can influence a reader. All of these techniques were detected in both tourism website; however, "Solva" resort website presents some limitation of the deployment of some of them.

Therefore, the language of tourism implies power of the speaker over the addressee, the art of persuasive or impressive speaking or writing. The use of promotional material on websites has an enormous power over the addressees due to the information they provide. The article identifies the specific language forms and enticing strategies employed in these tourism materials to achieve persuasion and to establish social control.

This article contributes to the field of tourism studies by focusing on how persuasion is activated in tourism communication by tourism destinations. In particular, the aim was to understand what modes of communication could be considered as persuasive ones. The results of this study could be helpful for those who create tourism marketing materials.

REFERENCES

[1] Jack G., Phipps A. *Tourism and Intercultural Exchange: Why Tourism Matters*. Channel View Publications, 2005.

[2] Salim M.A.B., Ibrahim N.A., Hassa, H. Language for tourism: A review of literature. *Procedia-Social and Behavioral Sciences*, **62** (2012), 136–143. doi: 10.1016/j.sbspro.2012.11.255

[3] Morgan N., Pritchard A. *Advertising in tourism and leisure*. Butterworth-Heinemann, Oxford, 2000.

[4] Kim H., Fesenmaier D.R. Persuasive design of destination web sites: An analysis of first impression. *Journal of Travel Research*, **47** (1) (2008), 3–13. doi: 10.1177/0047287507312405

[5] Maci S. *Tourism discourse: Professional, promotional and digital voices*. ECIG, Genova, 2013.

[6] Crisan R.E., Bolyai B., Cantemir D. *Tourism destination slogans – persuasive or manipulative?* Editura Universității "Petru Maior", 2013. Available at: http://www.diacronia.ro/ro/indexing/details/A23449/pdf

[7] Jorgensen L.G. *An analysis of a destination's image and the language of tourism.* The Aarhus School of Business, 2004.

[8] Cappelli G. *Sun, Sea, Sex and the Unspoilt Countryside. How the English language makes tourists out of readers.* Pari Publishing, Pari, 2006.

[9] Gotti M. The Language of Tourism as Specialized Discourse. In: Palusci O., Francesconi S. (Eds.), *Translating Tourism. Linguistic/cultural representations.* Editrice Università degli Studi di Trento, Trento, 2006, 15–34.

[10] Dann G.M. *The Language of Tourism – A Sociolinguistic Perspective.* CAB International, Oxford, 1996.

[11] French N. *Changes in attitudes as a result of persuasive communications with different emotional connotations*. Laurentian University, Ontario, 2008.

[12] Echtner C., Prasad P. The Context of Third World Tourism Marketing. *Annals of Tourism Research,* **30** (2003), 660–682. doi: 10.1016/S0160-7383(03)00045-8

[13] Marketing-Schools.org 2012. Availabale at: https://www.marketing-schools.org/types-of-marketing/persuasion-marketing.html

[14] Dann G.M. Take me to the Hilton: The language of tourism paradigm. *Folia Turistica*, **25** (1) (2011), 23–40.

[15] Kersic D. *How can Tour Operators use Storytelling to get more bookings*. Blog Articles, Orioly, 2017. Available at: https://www.orioly.com/tour-operators-use-storytelling-get-bookings/

[16] Miguéns J., Baggio R., Costa C. Social Media and Tourism Destinations: TripAdvisor Case Study. In: Proc. of the IASK Intern. Conf. on "Advances in Tourism Research", Aveiro, Portugal, January, 2008, Volume: 194–199, *IASK Proceedings ATR2008*, Aveiro, 2008, 1–6.

[17] Carvão S. Embracing user generated content within destination management organizations to gain a competitive insight into visitors' profiles. *Worldwide Hospitality and Tourism Themes*, **2** (4) (2010), 376–382.

[18] Cerutti S., Piva E. The role of tourists' feedback in the enhancement of religious tourism destinations. *International journal of religious tourism and pilgrimage*, **4** (3) (2016), 6–16. doi: 10.21427/D7TB1G

[19] Cialdini R.B. *Influence: Science and practice* (4th ed.). Allyn & Bacon, Boston, 2001.

[20] Ibrahim N., Shiratuddin M.F., Wong K.W. *Persuasion techniques for tourism website design.* In: Proc. of the Intern. Conf. on E-Technologies and Business on the Web (EBW2013), 7 - 9 May, Bangkok, 2013.

[21] Aitchison C.C. *Gender and leisure. Social and cultural perspectives.* Routledge, London, 2003.

[22] White C.J. *Emotions, gender and destination visitation intentions*. 12th International Tourism and Leisure Symposium, Barcelona, 2003. Available at: https://bit.ly/2KmB7KU

[23] Ryan M., Henley N., Soutar G. Gender differences in tourism destination: Implications for tourism marketers. In: Proc. of the Australian and New Zealand Marketing Conference, Online-Format, New Zealand, December 1, 1998. Available at: https://ro.ecu.edu.au/smatl_pubs/13

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Захарова Ганна. Пошук персуазивних стратегій у туристичному рекламному дискурсі. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 7–18.

Туризм як соціальне явище привертав увагу дослідників маркетологів упродовж усіх етапів свого розвитку. В основі успішної співпраці між суб'єктами туристичної діяльності та клієнтами перебуває комунікація. Переконлива сила рекламної мови й інструментів маркетингу дуже відчутна сьогодні. Насправді, щоб привернути увагу покупців, туристичні компанії вибирають різні способи, щоб переконати у перевагах свого бренду. У статті висвітлено та обговорено важливі аспекти стосовно мови туризму та шляхів його аналізу для виявлення переконливих прийомів, які використовуються для залучення потенційних туристів. У зв'язку з цим мовленнєвий вплив у туристичній рекламі реалізується шляхом переконання потенційного клієнта у необхідності сервісу/продукту. Рекламуючи туристичний продукт, рекламодавець чинить вплив на споживача, залучаючи різні ефективні засоби, щоб активізувати його прагнення придбати туристичні послуги (турпродукт). Розглядаються такі елементи персуазивного туристичного маркетингу: структурована комунікація, розповіді історій, копірайтинг, нейромаркетинг; методи переконання Cialdini' (2001), що впливають на людей (взаємність, прихильність та послідовність, соціальне підтвердження, симпатія, авторитет та дефіцит). У статті також висвітлено фактори гендерної орієнтації як важливі компоненти у виборі відповідної персуазивної стратегії при розробці рекламних матеріалів для туризму. У розділі результатів подано реальні приклади застосування зазначених стратегій впливу на аудиторію курортів "Карпати" та "Сольва". Усі ці методики становлять теоретичну базу для досліджень персуазивності і заслуговують на увагу, оскільки вони відіграють головну роль у просуванні будь-якого виду. Збір даних цього дослідження забезпечить оновлену інформацію стосовно риторики туризму.

Ключові слова: туризм, мовленнєвий вплив, туристичний рекламний дискурс, впливові техніки, маркетинг.

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ASSESSMENT OF EFFICIENCY OF AGRICULTURAL ENTERPRISE MANAGEMENT: METHODS AND TREND ANALYSIS

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Abstract. The paper analyzes various scientific approaches to assessing the effectiveness of enterprise management. The advantages and disadvantages of using the four most common methods of assessing the effectiveness of enterprises are substantiated, such as 1) comprehensive assessment based on the methods of economic analysis; 2) analysis based on experimental estimates; 3) using the scoring method; 4) assessment based on testing. Given the fact that currently there is no single approach to assessing the effectiveness of enterprise management, including agricultural enterprises, the article proposes the author's method of assessing the effectiveness of management in agricultural enterprises. This methodology assumes that the effectiveness of management in agricultural enterprises is determined by integrating three indicators: economic efficiency of management, social efficiency of management, and organizational efficiency of management. The proposed methodology includes the gradual integration of partial 19 indicators in terms of economic, social, and organizational efficiency. Analysis of this phenomenon was conducted based on agricultural enterprises of the Ivano-Frankivsk region aimed at testing the developed methodology for assessing the effectiveness of management. The paper presents the research of the influence of the number of employees on the level of management efficiency in agricultural enterprises, the influence of enterprise size (by land area) on the level of management efficiency in agricultural enterprises, and the influence of average employment per 100 hectares of agricultural land on the level of agricultural management. The research was done using the grouping method. According to the results of the study, it was established that the developed methods for assessing the effectiveness of the management of agricultural enterprises can be used in practice.

Keywords: management, management efficiency, agricultural enterprises, economic efficiency, social efficiency, organizational efficiency.

JEL Classification: J5, Q12.

1. INTRODUCTION

The management of an agricultural enterprise is a combined economic and managerial category, which characterizes a set of organizational and managerial measures to influence employees.

Modern management theory is actively developing in the world, as it is based on changing working conditions of employees, the internal features of the development of individuals and managers.

Given the wide popularity and branching of the modern management system of enterprises, the lack of a single scientifically sound approach to assessing the effectiveness of management remains an urgent problem. On the one hand, the existing pluralism of methodological approaches to assessing the effectiveness of management allows the researcher to choose the method that best suits or solves the problem. On the other hand, the variety of methods makes it impossible to conduct a comparative description of the effectiveness of management in different enterprises, in different periods, and so on. In turn, the lack of comparability hinders conducting an adequate, realistic assessment of the analyzed process.

2. Method

In domestic and foreign science, the most common methods of assessing the effectiveness of management in agricultural enterprises are:

1) comprehensive assessment based on the methods of economic analysis [1; 2; 3];
2) analysis based on experimental estimates [4, 5];
3) using the scoring method [6; 7; 8];
4) based on testing [9, 10].

Most scientists in the process of determining the effectiveness of personnel management use the methods of economic analysis. This, in our opinion, is because, first, this method allows you to get the most objective assessment, as it is based on financial and statistical data of the enterprise without the involvement of experts or other stakeholders. Secondly, this technique has the greatest potential for comparative analysis of individual enterprises or different reporting periods.

At the same time, an important disadvantage of applying only the methods of economic analysis is that such a complex concept as the effectiveness of personnel management is difficult to describe by several technical and economic indicators.

3. Results and Discussion

With this in mind, we have developed our methodology for assessing the effectiveness of management in agricultural enterprises. This method of assessing the effectiveness of management of agricultural enterprises is based on the definition of 19 indicators (Tab. 1).

Levels of management efficiency	**Indicators**	**Method of calculation**
Economic efficiency of management	Balance profit, thousand UAH	Revenue from sales without production costs
	The level of return on capital,%	The ratio of profit to the value of fixed assets
	The level of product profitability,%	The ratio of profit to the cost of production
	Costs of 1 UAH products, kop. / UAH	The ratio of cost to the cost of commodity products
	Volume of commodity products, UAH	The cost of goods sold
	Labor productivity, UAH	The ratio of output to the total number of workers employed in production
	Number of employees, pers.	The average number of employees per year

Levels of management efficiency	Indicators	Method of calculation
Organizational efficiency of management	The ratio of productivity growth and wages,%	The ratio of productivity growth to average wage growth
	Frequency of occupational injuries,%	The ratio of the number of cases of occupational injuries to the total number of staff
	Product quality, points or %	The ratio of proportion of the lack to the volume of production
	Level of labor discipline, violation/people or points	The ratio of the number of cases of violation of labor and executive discipline to the total number of staff
	Staff stability coefficient	The ratio of the number of employees with experience in the organization more than one year (for a certain period) to the average number of employees for the relevant period
	Coefficient of discipline	The ratio of absenteeism to the total number of man-hours for the relevant period
Social efficiency of management	Remuneration fund, UAH	General fund of basic and additional wages
	Average salary per 1 worker, UAH / month	The ratio of the general wage fund to the total number of staff
	Staff turnover rate, coefficient	The ratio of the number of employees who resigned from the organization during a certain period (minus inevitably dismissed) to the average number of employees for the relevant period
	Uniformity of staff loading, points	The ratio of the number of working days (employment) of employees to the total number of working days in the period
	Socio-psychological climate of the team, points	Established on the basis of specific sociological and psychological research

Tab. 1. The system of indicators for assessing the effectiveness of management in agricultural enterprises.
Source: developed by the authors.

All indicators are classified in three groups or levels of efficiency of personnel management: economic, organizational and social.

The first level of management efficiency (economic) is characterized by the main performance indicators of agricultural enterprises, which to some extent indicate the effectiveness or inefficiency of management.

The second level of management efficiency (organizational) is described by a set of indicators reflecting the working conditions of employees in the enterprise, the level of discipline and other parameters of management efficiency of labor organization and production.

The third level of management efficiency (social) includes a number of indicators characterizing the effectiveness of management in terms of effect for employees. This group of indicators is important because it shows the degree of employee satisfaction with the created working conditions, the level of wages and so on. It is obvious that the presence of a social effect will indicate changes in the productivity of employees, and hence in the efficiency of the enterprise as a whole.

Indicators (listed in table 1) in terms of three levels of management efficiency are closely interrelated, as they interdependent changes. Economic and social efficiency largely depends on the organized efficiency of personnel management.

In order to test the developed methods in practice, an assessment of the effectiveness of management of agricultural enterprises in Ivano-Frankivsk region was done. The object of the study was 103 enterprises of the region, reported in the form № 50-ag. The analysis was conducted for the period 2015-2018.

According to the results of the calculations, it was determined that the highest level of management efficiency was 0.27 in the enterprise of Rozhnyativ district, the highest indicator was in Rohatyn district and amounted to 51.26.

To conduct further research and identify trends and factors affecting the effectiveness of personnel management of agricultural enterprises, we divided the results in three groups (Tab. 2).

Groups	**Number of enterprises in the group**	**The average value of the level of personnel management efficiency**	**Number of enterprises by districts of the region**
I group – up to 17.27	58	9.34	Ivano-Frankivsk - 3; Bohorodchany - 4; Halytsky - 3; Horodenkivskyi - 4; Dolynsky - 2; Kolomyia - 9; Rohatynsky - 7; Rozhnyativsky - 2; Sniatynsky - 10; Tlumatsky - 6; Tysmenytskyi - 8
II group – 17,28 – 34.28	37	24.27	Ivano-Frankivsk - 1; Halytsky - 2; Horodenkivskyi - 7; Kolomyia - 4; Nadvirnyansky - 1; Rohatynsky - 7; Sniatynsky - 6; Tlumatsky - 4; Tysmenytskyi - 5
III group – 34.29 – and more	8	44.49	Horodenkivskyi - 2; Kalush - 1; Kolomyia - 1; Rohatynsky - 1; Sniatynsky - 1; Tlumatsky - 1; Tysmenytsky - 1.

Tab. 2. Grouping of agricultural enterprises of Ivano-Frankivsk region at the level of management efficiency. Source: calculated on the basis of [11].

Table 2 summarizes a number of conclusions:

1) the most numerous group in terms of management efficiency is group I, where the integrated analyzed indicator is up to 9.34. The number of enterprises included in this group is 58 units or 56% of all agricultural enterprises in the region. This group includes enterprises of all levels of Ivano-Frankivsk region. Undoubtedly, this indicates negative trends in the organization of management activities of agricultural enterprises;

2) the second group of enterprises with the level of management efficiency according to the integrated indicator Emp from 17.28 to 34.28 includes 37 enterprises or 36%, i.e. about a third of all enterprises. The average value of the analyzed indicator Emp in the group is only 24.27.

3) the third group of enterprises with the level of management efficiency includes only 8 enterprises, which is only 7.8% of the total number of agricultural enterprises in Ivano-Frankivsk region. The average value of the analyzed indicator is 44.49, which is 4.8 times higher than the indicator for group I and 1.8 times higher than the average for group II. In the territorial aspect, the analysis shows that such enterprises are presented, as a rule, by one unit in certain calculations. Additional calculations and observations show that this group includes powerful agricultural enterprises of the Landfarm agroholding group and other enterprises with foreign investment. For the most part, these agricultural formations specialize in the animal sector.

The next stage of the study is to establish the relationship of the analyzed integrated indicator with the number of labor of the enterprise 1 (Tab. 3).

Groups	Number of enterprises in the group	The average value of the level of management efficiency	The average number of employees per 1 enterprise, pers.
I group – up to 17.27	58	9.34	26
II group – 17.28 – 34.28	37	24.27	34
III group – 34.29 – and more	8	44.49	86

Tab. 3. Analysis of the impact of the number of employees on the level of efficiency of their management. Source: calculated on the basis of [11].

From the data of table 3 and some other performed calculations the conclusions are generalized. There is a direct relationship between the level of efficiency of personnel management and the average number of employees in agricultural enterprises. Thus, the highest level of efficiency of personnel management is observed in those enterprises where there are more employees. Thus, the first group according to the indictor Emp includes enterprises with an average number of employees of 26 people, the second group includes agricultural formations, where the average number of employees is 34 people, the third group includes enterprises with an average number of employees of 86 people, which is 3.5 times more than in group I enterprises and 2.5 times more than in group II enterprises.

This is due to the fact that in large enterprises, including enterprises with foreign investment, there is an extensive management system, including personnel management, and new techniques are used in the management of the enterprise and personnel.

Thus, the data in Table 3 show that there is a direct close relationship between the number of employees in agricultural enterprises and the level of efficiency of their management. As the number of employees increases, the effectiveness of the management process grows.

To deepen this study, an analysis was conducted to establish the relationship between the size of enterprises (by land area) and the level of efficiency of personnel management (Tab. 4).

Based on the data in table 4, we can summarize a number of conclusions. Thus, there is a direct relationship between the size of agricultural enterprises (by land area) and the level of efficiency of personnel management. If in group I with the lowest level of management efficiency (Emp = 9.34) the average farm size is 1041.9 ha, then in group II, where Emp is 24.27, i.e. 2.6 times more, the average size of agricultural formations is 1255.8 hectares, which is 213.9 hectares or 1.2 times more than in group I.

Groups	Number of enterprises in the group	The average value of the level of management efficiency	The arable land of 1 enterprise, ha
I group – up to 17.27	58	9.34	1041.9
II group – 17.28 – 34.28	37	24.27	1255.8
III group – 34.29 – and more	8	44.49	5376.7

Tab. 4. The influence of the size of enterprises (by land area) on the level of efficiency of enterprise management. Source: calculated on the basis of [11].

In the third group of enterprises indicator Emp is 44.49, which is 1.8 times higher than in the second group and 4.8 times higher than in the first group. Accordingly, the area of agricultural land per 1 enterprise in group III is 4.3 times larger than in group II and 5.2 times larger than in group I.

From the calculations it follows that in group III the average size of enterprises and other performance indicators of enterprises are much higher than in other enterprises of the region.

The next step in the study of causal relationships and dependencies is to analyze the impact of staffing per 100 hectares of land on the level of efficiency of its management (Tab. 5).

Groups	Number of enterprises in the group	The average value of the level of management efficiency	The average number of employees per 100 hectares of land, pers.
I group – up to 17.27	58	9.34	27
II group – 17.28 – 34.28	37	24.27	29
III group – 34.29 – and more	8	44.49	19

Tab. 5. Analysis of the impact of land supply of enterprises by staff on the level of efficiency of its enterprise management. Source: calculated on the basis of [11].

From the data of table 5 and the data of other calculations we have a number of conclusions:

1) between the analyzed indicators there is no direct relationship in trends;

2) in the enterprises of groups I and II, where Emp is 9.34 and 24.27, respectively, the average number of employees per 100 hectares of land was 27 and 29, respectively, i.e. almost the same. In the third group of enterprises - where the Emp indicator is much higher - 44.49, the average number of employees per 100 hectares of land is only 19;

3) additional analysis shows that the reasons for this are that a small number of enterprises of group III - 8 units is characterized by a high level of technical and technological equipment, organization of production and labor, which allows to use less manual labor, obtaining higher performance. In addition, most companies in this group specialize in animal husbandry, including PJSC "Avargard" (Tysmenytsia district), LLC "Rosan-Agro" (Rohatyn district), LLC "Stern-Agro" (Tlumach district), LLC "Danosha" (Kalush district). These enterprises usually use the area of agricultural land to obtain the necessary fodder base.

The results of research (Tab. 6) showed that the level of management efficiency is directly dependent on the amount of resources involved in the production process. The larger the company, the higher the concentration of production, the more rationally organized personnel management.

Indicator	Group of enterprises by the level of efficiency of personnel management		
	I. Emp to 17.27	II. Emp 17.28 – 34.28	III. Emp 34.29 and more
Number of enterprises in the group	58	37	8
The average value of the level of efficiency of personnel management	9.34	24.27	44.49
The average number of agricultural employees per enterprise, persons	26	34	86
Area of agricultural land per enterprise, ha	1042	1256	5377
The average number of employees per 100 hectares of agricultural land lands, persons	2.5	2.7	1.6

Tab. 6. Dependence on the effectiveness of agricultural management enterprises of Ivano-Frankivsk region from certain factors, on average for 2015-2018. Source: calculated on the basis of [11].

Thus, based on the developed methodology for assessing the effectiveness of management of agricultural enterprises a comprehensive analysis of agricultural formations of Ivano-Frankivsk region was conducted. The main causal relationships and factors that affect the level of effectiveness of the management process were identified.

4. CONCLUSIONS

Based on the development of various scientific approaches to assessing the effectiveness of management of agricultural enterprises, we have developed our own methodology for assessing the effectiveness of management of agricultural enterprises, based on an integrated assessment of three components of enterprise management: economic efficiency, social management and organizational management. Approbation of this method was based on the analysis of agricultural enterprises of Ivano-Frankivsk for the period 2015-2018. In the process of assessing the effectiveness of management of agricultural enterprises, the main factors influencing this process by using the grouping method were investigated. The results of the approbation showed that the developed methodology for assessing the effectiveness of management of agricultural enterprises can be used in practice.

REFERENCES

[1] Zavadsky J.S. *Management: in 2 volumes.* Kyiv, 2003. (in Ukrainian)

[2] Kuzmin O.Ye., Melnyk O.G. *Fundamentals of Management: A Textbook*. Kyiv, 2007. (in Ukrainian)

[3] Yakubiv V.M., Gorogotska N.I., Yakubiv R.D. Management model of agricultural enterprises development through implementation of diversification processes. *Current Issues in Economics*, **8** (2015), 58–65.

[4] Yakubiv V., Boryshkevych I. Strategic analysis of the development of renewable energetics in the world and in Ukraine. *Journal of Vasyl Stefanyk Precarpathian National University*, **5** (3-4) (2018), 33–43. doi: 10.15330/jpnu.5.3-4.33-43

[5] Yakubiv V., Polujk M. Innovative methodologies for estimating the personnel of agricultural enterprises in Ukraine. *Scientific Papers. Series "Management, Economic Engineering in Agriculture and Rural Development"*, **19** (1) (2019). Available at: http://managementjournal.usamv.ro/pdf/vol.19_1 /volume_19_1_2019.pdf

[6] Yakubiv V. Accounting and analytical methods of diagnostics improvement for enterprises' organizational development. *Economic Annals-XXI*, **3-4** (1) (2015), 68–71.

[7] Osovskaya G.V., Osovskaya O.A. *Fundamentals of Management: A Textbook.* Kyiv, 2006. (in Ukrainian)

[8] Ian Mann. Reviews: *Bedtime stories for managers*. Available at: https://www.fin24.com/Opinion/ian-mann-reviews-bedtime-stories-for-managers-20191014

[9] Lukianykhin V.A. *Staff Management: A Training Manual*. Kyiv, 2004. (in Ukrainian)

[10] Boryshkevych I. Formulation of a typical development strategy for agricultural enterprises (by the method of hoshin kanri). *Journal of Vasyl Stefanyk Precarpathian National University*, **6** (3-4) (2019), 15–21.

[11] *Statistical Yearbook of Ivano-Frankivsk region 2018: Statistical collection*. Main Department of Statistics in Ivano-Frankivsk region, Ivano-Frankivsk, 2019. (in Ukrainian)

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Якубів Валентина, Якубів Роман, Максимів Юлія, Григорук Ірина, Попадинець Назарій, Іващук Наталія. Оцінка ефективності управління сільськогосподарськими підприємствами: методика та аналіз тенденцій. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 19–26.

У статті проаналізовано різні наукові підходи до здійснення оцінки ефективності управління підприємствами. Обґрунтовано переваги і недоліки використання чотирьох найпоширеніших методів оцінки ефективності діяльності підприємств: 1) комплексна оцінка на методах економічного аналізу; 2) аналіз на основі експериментних оцінок; 3) за допомогою бального методу; 4) на основі тестування. Враховуючи те, що на даний час відсутній єдиний підхід до оцінки ефективності управління підприємствами, і в т.ч. сільськогосподарськими підприємствами, у статті запропоновано авторську методику оцінки ефективності менеджменту на сільськогосподарських підприємств. Дана методика передбачає, що ефективність управління на сільськогосподарських підприємствах визначається шляхом інтегруванням трьох показників: економічної ефективності управління, соціальної ефективності управління та організаційної ефективності управління. Запропонована методика передбачає поетапне інтегрування часткових 19 показників в розрізі економічної, соціальної та організаційної ефективності діяльності. З метою апробації розробленої методики оцінки ефективності управління проведено аналіз даного явища на базі сільськогосподарських підприємств Івано-Франківської області. На основі використання методу групування досліджено вплив чисельності працівників на рівень ефективності менеджменту на сільськогосподарських підприємствах, вплив розміру підприємства (за площами земель) на рівень ефективності менеджменту на сільськогосподарських підприємствах та вплив середнього рівня забезпеченості працівниками на 100 га сільськогосподарських угідь на рівень ефективності управління агроформуваннями. За результатами дослідження встановлено, що розроблена нами методика оцінки ефективності управління сільськогосподарськими підприємствами може використовуватись на практиці.

Ключові слова: управління, ефективність управління, сільськогосподарські підприємства, економічна ефективність, соціальна ефективність, організаційна ефективність.

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CLASSIFICATION OF STRATEGIES FOR SOCIO-ECONOMIC DEVELOPMENT OF UNITED TERRITORIAL COMMUNITIES

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Abstract. The article deals with the classification of strategies for socio-economic development of united territorial communities in a dynamic business environment. The purpose of the article is to build a classification of strategies for socio-economic development of the united territorial communities to increase the effectiveness of their development and implementation in practice. Based on the conducted research, the author's vision of defining the essence of 'socio-economic development of united territorial communities' was formed. It will contribute to a clearer understanding of this category. We defined the characteristics that determine the socio-economic development of the united territorial community. We evaluated the dynamics of the process of creating territorial communities in Ukraine and identified opportunities for creating new communities. To build a strategy for the socio-economic development of united territorial communities that would meet the requirements of the modern business environment, as well as satisfy the expectations that are set for it, we systemized various types of strategies into classification groups. Among them: development strategies, strategies of management and utilization of united territorial communities resources, gender-oriented strategies, strategies to counter, strategies of the development of the economic sectors, strategies of the development of UTC areas, digitalization strategies, communication and information strategies, management strategies, European integration strategies. The developed classification of strategies will contribute to a more accurate formation of strategic goals and actions, and contribute to the effective implementation and realization of the developed strategy of united territorial communities. The obtained results of the study serve as the basis for subsequent research in terms of ensuring the socio-economic development of united territorial communities.

Keywords: strategy, socio-economic development, sustainable development, united territorial communities, classification groups of strategies.

JEL Classification: R58, Q01.

1. INTRODUCTION

The current state of implementation of reforms in Ukraine largely depends on the processes of decentralization, which form a new system of local self-government, through which territorial communities are given the authority to use resources, have access to services to meet the needs of citizens. Identification of priority directions and ways of development of the united territorial community is declared in the strategy of socio-economic development.

It should be noted that its formation should be carried out in accordance with the concept of sustainable development, which is associated with improving the quality of all spheres of human life. [1, p. 376]. Therefore, taking into account the social, environmental and economic priorities of sustainable development will contribute to the socio-economic development of the united territorial community to meet the needs of all interested parties: society, business and the state.

It is impossible to ensure the practical implementation of the socio-economic development strategy of the united territorial community without considering the types of such strategies and identifying them. Therefore, there is a need to conduct a study on classifications of strategies for socio-economic development of united territorial communities to ensure their effective implementation in the modern business environment through compliance with the concept of sustainable development.

2. Theoretical Background

Before investigating the classification of strategies for socio-economic development of united territorial communities, we consider it necessary to review the literature. As a result of studying scientific sources, it is established that the term 'socio-economic development' characterizes the relationship between the degree of economic development and the solution of socially significant problematic issues of society and business entities operating in it. This definition also includes transformational processes in the relations of economic entities with various social population groups within the framework of the concept of sustainable development [2].

Some publications emphasize that it is possible to ensure the sustainable development of united territorial communities if social responsibility is introduced, which covers such areas as respect for human rights; compliance with the law; business and corporate ethics; environmental protection; cooperation with stakeholders; compliance with international standards of conduct; care for the elderly; transparency and reporting [3, p. 129].

It is worth mentioning that according to the ISO 26000 social responsibility standard, 'social responsibility is the responsibility of an organization for the impact of its decisions and activities on society and the environment, acting ethically and transparently, which contributes to the health and well-being of society; takes into account the expectations of stakeholders and complies with current legislation; meets international standards of conduct and is integrated into the activities of the entire organization' (ISO, 2018b) [4, p. 37].

It is also investigated that scientists distinguish two points of view on the essence of regional development:

– according to the first one, 'regional development is a multidimensional process, usually considered as a set of different social and economic goals. According to M. Buianova, it is understood as the functioning mode of the regional system, focused on the positive dynamics of the parameters of population's level and quality of life, ensured by a stable and balanced reproduction of the social, economic, resource and ecological potentials of territories' [5, p. 20];

– according to the second, in the view of T. Skufina, 'it should be understood as any, not necessarily progressive, changes in economic and social components according to STP, the growing influence of interregional and intersectoral competition, the growing importance of public administration of macro, meso and microeconomic processes' [5, p. 33].

Scientists also emphasize that in general, sustainable development should be considered within a single country, region or enterprise in the context of three components: economic, social and environmental [6, p. 206]. This fact has a direct impact on the classification of strategies, including strategies for the socio-economic development of united territorial communities.

3. Research Objective, Methodology and Data

To confirm our hypothesis, we studied the scientific works of leading researchers and strategic documents that form strategic goals for the socio-economic development of communities, taking into account sustainable development. We analyzed: 1) scientific publications in journals indexed by Scopus the international scientific metric database. We considered only qualitative studies, the results of which were published in high-level scientific publications, and therefore cited by other researchers; 2) community development strategies; 3) public sphere development strategies. As for them, we analyzed the content of national and regional strategies and countries associations to implement the best ones in Ukrainian practice. It can also be useful for countries with similar levels of socio-economic development.

The results presented in the article will encourage further research and help in the development of strategies for the socio-economic development of united territorial communities.

4. Results and Discussion

The study of special literature of research economists regarding the existing positions on identifying the essence of socio-economic development allowed us to form the following author's interpretation of the definition of socio-economic development of a united territorial community.

Socio-economic development of a united territorial community is a purposeful, natural change in the economic state of a united territorial community through solving socially significant problems aimed at observing the concept of sustainable development in a modern changing business environment, as a result of which the community moves to a new qualitative state. The results presented in the article will encourage further research and help in the development of strategies for the socio-economic development of united territorial communities.

It should be noted that only the simultaneous presence of all three of the following characteristics distinguishes development processes from other changes. Those are:

- cyclic reproduction of a permanent functioning system;
- the presence of development regularities with clearly defined strategic directions;
- there is a single line of priorities in different areas, which has a cumulative effect.

In our opinion, the characteristics that determine the socio-economic development of a united territorial community (hereinafter UTC) should be considered:

– changes in the economic sphere – quantitative characteristics in the development of the territorial community economic system, which provides an opportunity to assess the development of small and medium-sized businesses, overcoming poverty, the efficiency of using energy resources; the efficiency of using budget funds, investments, grants, other types of financial support; the amount of funding for the implementation of the UTC social responsibility program, etc.;

– changes in internal business processes within the UTC (in particular, the management process, main and security processes), which provide an assessment of trends in the effectiveness of the implementation of the UTC's socio-economic development strategy, the success of achieving sustainable development goals, the implementation of decisions by the management personnel of the UTC; the quality of services provided by suppliers (educational, cultural, medical institutions, etc.) and enterprises that operate on the territory of the UTC; the functioning provision of the UTC with the necessary resources; the budgeting process [7, p. 229; 8, p. 301];

– changes in the social sphere – assessment of the implementation of UTC social responsibility program, satisfaction of the community population and their well-being, in particular in terms of social living conditions, the quality of social services received, the level of consumers satisfaction and their well-being. It makes possible to assess the level of social responsibility of UTC to society in the context of the implementation of sustainable development goals;

– changes in the environmental sphere – the impact of enterprises 'activities in the territory of UTC on the environment, compliance with environmental requirements and enterprises' activities, which will affect their business reputation and competitiveness [3, p. 134].

Changes in the above areas can be estimated using a balanced system of indicators, which can act as an analytical tool for ensuring the implementation of socio-economic development strategy of UTC in the context of the concept of sustainable development.

Given the subject of our research, we consider it necessary to diagnose the state of the UTC creation process.

At the same time, it should be noted that a united territorial community (UTC) is a voluntary association of residents on a contractual basis of several disparate villages, towns or cities into one administrative and command center. After consolidation, a new administrative center is formed, within which local self-government bodies are created and carry out their activities.

The law of Ukraine 'On Voluntary Unification of Territorial Communities' is the primary and main regulatory document regulating the process of creating a united community [9]. It is important to note that the formation of UTC is impossible without the decentralization reform.

It is established that united communities are formed in accordance with the need of economic efficiency and development of geographically adjacent villages, towns, and cities. A united territorial community with an administrative center in a city can be called an urban territorial community, and a community with a center in an urban type settlement can be called a settlement community, and a community with a center in a village can be called a village community.

The newly created territorial community receives the resources of all combined localities and corresponding powers on its balance sheet. It should be noted that during the merger, the newly created association conducts independent economic activities and directly cooperates with the city budgets and the state budget of Ukraine, and without direct subordination to the mayor. The newly created association has the right to determine the direction of its activities, search for investors and independently distribute profits to the community's own needs.

It is established that as of 10.01.2020, 1029 UTC with a population of 11.7 million people were created in Ukraine. Long-term plans for the formation of community territories cover 90.3% of the country's territory in 12 countries [10]. The dynamics of creating the number of UTCs in Ukraine in 2015-2019 is shown at Fig. 1.

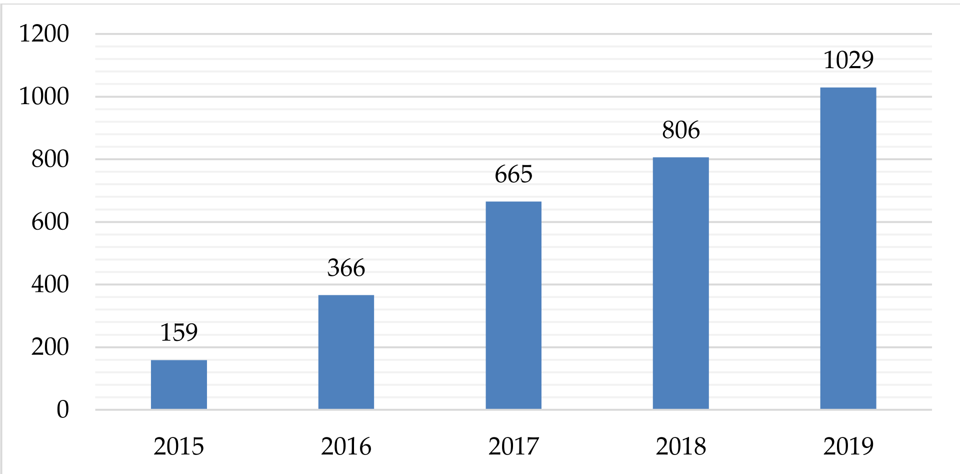

Fig. 1. Dynamics of the UTC number in Ukraine in 2015-2019. Source: [10].

Based on the monitoring of the process of power decentralization and local self-government reform, the Ministry for Communities and Territories development of Ukraine has formed a rating of regions for the formation of capable communities in terms of the overall rating and place according to the parameters shown in Tab. 1.

Region	Overall rating	Capable Local Communities Rating						
		Population of UTC, MOH (thousand people)	UTC area, MOH	Number of UTC that were not merged	Districts that were not united or merged	Number of UTC, with a population of less than 5 thousand people	UTC with administrative centers in cities of regional significance	Coverage with long-term plans
Zhytomyк	1	5	3	3	1	11	3	3
Dnipropetrovsk	2	2	2	2	1	16	7	1
Chernihiv	3	4	4	4	1	14	2	4
Khmelnytsk	4	8	5	5	2	9	4	1
Zaporizhzhia	5	3	1	1	1	19	9	1
Volyn	6	10	6	6	1	12	6	1
Sumy	7	9	12	12	3	10	1	2
Donetsk	8	1	11	11	16	5	9	1
Chernivtsi	9	14	8	10	7	6	2	11
Ternopil	10	16	9	8	4	17	2	6
Mykolaiv	11	6	7	9	8	15	9	12
Luhansk	12	7	10	7	10	22	11	1
Rivne	13	21	15	14	9	8	2	1
Ivano-Frankivsk	14	22	17	18	5	3	2	8
Kharkiv	15	12	19	19	18	1	5	1
Poltava	16	11	16	16	6	18	4	7
Kherson	17	17	14	13	13	20	2	10
Cherkasy	18	15	13	15	2	21	10	15
Odesa	19	13	18	17	16	6	8	17
Kyiv	20	18	22	20	15	4	4	16
Lviv	21	20	21	22	12	7	11	13
Zakarpattia	22	24	24	24	14	2	9	9
Vinnytsia	23	23	23	21	11	13	2	14
Kirovohrad	24	19	20	23	17	23	11	5

Tab. 1. Capable Local Communities Rating. Source: [11].

In particular, the data in the table shows that the Ivano-Frankivsk region is on the 14th place in this rating and has 18 more territorial communities that have not been merged. And in general, for all regions in Ukraine, there are only 300 territorial communities that have not been united.

As a result of studying analytical information on the rating of regions about the formation of capable communities, quite significant opportunities for creating new communities have been identified, and this indicates the need to develop strategies for their socio-economic development. So, the question of classifying such strategies for the development of UTC in the context of ensuring sustainable development not only in the region but also in the country as a whole is relevant.

The conducted empirical research allowed us to establish that the development of a strategy for the socio-economic development of UTC begins with the preparation of a regulatory document, which should indicate all strategic goals, methods and means for their implementation. This document should indicate priority areas of activity, taking into account the available financial, technical, information and human resources, which should contribute to the sustainable development of the community for the relevant strategic period.

The strategy is considered as the main regulatory document, not only in the economic direction but also in the social one, which focuses on the rational use of human potential, technology, financial and natural resources due to the effective management of a local government body, which is based on the effective implementation of the main priority areas defined by such a strategy [2].

In order to develop a strategy for the socio-economic development of UTC that would meet the requirements of the modern business environment, as well as meet the expectations that are set for it, we consider it necessary to study the types of such strategies.

As a result of studying the specialized literature, there was no systematic classification of types of strategies for socio-economic development of UTC. However, the empirical study allowed us to identify various strategies that have been developed and implemented in the practical activities of the subject. Therefore, we have systematized such strategies and grouped them into classification groups (Table 2): development strategies, strategies of management and utilization of united territorial communities resources, gender-oriented strategies, strategies to counter, development of the economic sector's strategies, strategies of development of united territorial communities areas, digitalization strategies, communication and information strategies, management strategies, European integration strategies.

Classification group	Types of strategies
Development strategies	Investment development strategy
	Innovative development strategy
	Sustainable development strategy
	Balanced development strategy
Strategies of management and utilization of UTC resources	Resource and financing mobilization strategy
	Resource-saving strategy
	UTC population development strategy
	Environmental protection strategy
Gender-oriented strategies	Gender strategy
	Gender equality and non-discrimination strategy
Strategies to counter	Anti-bullying strategy
	Anti-discrimination strategy
	Strategy on organized crime
	Anti-Corruption Strategy
	Strategy on global environmental pollution
Strategies of development of economic sectors	Strategies for the development of economic sectors (electric power, fuel, ferrous and non-ferrous metallurgy, chemical and petrochemical, machine-building, metalworking, forestry, woodworking, light, food and others)
Strategies of development of UTC areas	Strategy for the development of education, medicine, culture, sports, entrepreneurship, tourism, infrastructure, and other areas at the UTC level
Digitalization strategies	Digital strategy
	Cloud strategy
	Cybersecurity strategy
	Digital transformation strategy
Communication and information strategies	PR strategy
	Communication strategy
	Information strategy
	Media strategy
Management strategies	Management modernization strategy
	Management reform strategy
	Change response strategy
European integration strategies	Communication strategy in the field of European integration
	Information and communication strategy for European integration
	European integration strategy

Tab. 2. Classification of socio-economic development strategies of UTC. Source: compiled by the authors.

The classification group 'Development Strategies' includes strategies for the socio-economic development of UTC that provide for the appropriate direction in the development of the community, namely the strategy: investment development, innovative development, sustainable development, balanced development. If investment, innovation and sustainable development strategies are widely used and understandable, then a balanced development strategy requires additional explanation.

The study shows that the strategy of balanced development of UTC in the literature is proposed to understand as a long-term qualitatively defined direction of development, based on a set of systematized actions that allow us to determine the most appropriate tools and measures for implementing procedures, parameters and processes of socio-economic development of UTC based on strategic priorities. Such a strategy requires the formation of new scientific approaches and practical actions that meet not only modern conditions, but also provide for the prospects for socio-economic development of UTC [5, p. 35].

The classification group 'Strategies for managing and using UTC resources' includes strategies that are aimed at improving the efficiency of available financial and natural resources use, developing the population and protecting the environment of UTC.

The classification group 'Gender-oriented strategies' includes strategies that are currently being implemented in the country and extend to the level of UTC and are focused on promoting gender priorities, improving the efficiency of using community budget funds depending on its needs, applying gender-oriented budgeting and introducing non-discrimination.

The classification group 'Strategies to counter' was formed by strategies that are focused on eliminating the negative manifestations of the relevant phenomenon or process for the prevention and fight against bullying, discrimination, organized crime, corruption, and a strategy for combating global environmental pollution.

The classification group 'Strategies of the development of economic sectors' was formed by strategies aimed at the development of certain sectors of the economy at the UTC level, in particular: electric power, fuel, forestry, woodworking, light, food, etc.

The classification group 'Strategies of the development of UTC areas' includes strategies that are focused on the development of education, medicine, culture, sports, entrepreneurship, tourism, infrastructure, and other areas at the UTC level. It is to promote the development of the relevant areas, which are identified as strategically important for the relevant UTC.

The classification group 'Digitalization strategies' includes strategies that have recently begun to form as a response to the challenges of our time through the development of the digital economy, the creation of cybersecurity infrastructure, and determining the directions and tasks of digital transformation.

The classification group 'Communication and information strategies' is represented by strategies that are aimed at establishing communication links in UTC, using PR technologies to form a positive reputation of UTC and increase its competitiveness, as well as using media literacy technologies, which is also formed taking into account modern needs and challenges.

The classification group 'Management Strategies' includes strategies that provide for the application of an appropriate approach in the process of managing UTC through modernization and reform of public administration through the possibility of timely response to new changes. Such strategies should contribute to achieving a new quality level in UTC management.

The classification group 'European integration strategies' includes strategies for improving information/communication on European integration topics in society.

So, the above classification of strategies for socio-economic development of UTC will contribute to a more accurate formation of strategic goals and measures, as well as effective implementation, monitoring and implementation of the strategy of UTC, which will contribute to the economic development of communities, increase their social responsibility and environmental awareness.

5. Conclusions

Thus, the conducted research on the formation of classification of strategies for socio-economic development of UTC began with the formation of the author's definition of the essence of socio-economic development of UTC. Therefore, the socio-economic development of a united territorial community is a purposeful, natural change in the economic state and the solution of socially significant problems, aimed at observing the concept of sustainable development in a modern changing business environment, as a result of which the community moves to a new qualitative state.

Based on the understanding of the essence of socio-economic development, strategies are systematized and grouped into classification groups, such as: development strategies, strategies of management and utilization of UTC resources, gender-oriented strategies, strategies to counter, strategies of the development of economic sectors, strategies of the development of UTC areas, digitalization strategies, communication and information strategies, management strategies, European integration strategies. The developed classification groups of strategies for socio-economic development of UTC will contribute to improving the effectiveness of implementing of the appropriate strategy type, taking into account the needs of society and the challenges of the modern business environment.

The obtained results of the study serve as the basis for subsequent research in terms of ensuring the socio-economic development of UTC.

References

[1] Pylypiv N.I., Piatnychuk I.D., Maksymiv Yu.V. Ensuring sustainable development of the enterprise by modern tools of strategic management: the concept of business administration. Proc. of the Intern. Conf. "Theory and Practice of Strategic Management of Industrial and Regional Social Systems", IFNTUOG, Ivano-Frankivsk, Ukraine, October 11-13, 2017, IFNTUOG, Ivano-Frankivsk, 2017, 376–379. (in Ukrainian)

[2] Tyukha I.V. Socio-economic development of the enterprise: essence and species manifestations. *Efficient Economics*, **6** (2012). Available at: http://www.economy.nayka.com.ua/?op=1&z=1195 (in Ukrainian)

[3] Pylypiv N., Piatnychuk I., Halachenko O., Maksymiv Yu., Popadynets N. Balanced scorecard for implementing united territorial communities' social responsibility. *Problems and Perspectives in Management*, **18** (2) (2020), 128–139. doi:10.21511/ppm.18(2).2020.12

[4] Pylypiv N.I., Piatnychuk I.D., Sologub S.I. Concept of ATC social responsibility in the context of sustainable development. *Bulletin of the Precarpathian University. Series: Economics*, **13** (2018), 36–42. Available at: http://lib.pnu.edu.ua:8080/handle/123456789/2531 (in Ukrainian)

[5] Dubnytsky V.I., Komirna V.V., Ganzhela I.P. Strategy of development of social infrastructure of the region: model, regularities, arguments, urgency, result. *Social economy*, **1** (2016), 30–38. Available at: http://nbuv.gov.ua/UJRN/se_2016_1_6 (in Ukrainian)

[6] Pylypiv N.I., Piatnychuk I.D., Maksymiv Yu.V. Conceptual approach to construction of accounting and information provision of social responsibility for business enterprises through the prism of the business partnership system. *Financial and credit activity: problems of theory and practice,* **27** (2018), 201–211. Available at: http://lib.pnu.edu.ua:8080/handle/123456789/1910

[7] Piatnychuk I.D. Systematization of approaches to determining the principles and methods of budgeting. *Scientific and Information Bulletin of Ivano-Frankivsk University of Law named after King Danylo Halytsky*, **12** (2015), 228–236. Available at: http://nbuv.gov.ua/UJRN/Nivif_2015_12_34 (in Ukrainian)

[8] Piatnychuk I.D. Categorical apparatus and tools of the budgeting system. *Scientific and Information Bulletin of Ivano-Frankivsk University of Law named after King Danylo Halytsky,* **9** (2014), 298–304. (in Ukrainian)

[9] Law of Ukraine "On Voluntary Association of Territorial Communities". The Verkhovna Rada of Ukraine, № 157-VIII of February 5, 2015. Available at: https://zakon.rada.gov.ua/laws/show/157-VIII#Text (in Ukrainian)

[10] What happened in the development of communities and territories in 2019 - data from the monitoring of decentralization. *Portal "Decentralization"*, (2020). Available at: https://decentralization.gov.ua/news/12055. (in Ukrainian)

[11] *Monitoring the process of decentralization of power and reform of local self-government.* Ministry of Development of Communities and Territories of Ukraine. Kyiv, 2020. Available at: https://decentralization.gov.ua/mainmonitoring (in Ukrainian)

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У статті розглянуто питання класифікації стратегій соціально-економічного розвитку об'єднаних територіальних громад в умовах динамічного бізнес-середовища. Метою статті є розробити класифікацію стратегій соціально-економічного розвитку об'єднаних територіальних громад для підвищення ефективності їх розробки та імплементації у практичну діяльність. На основі проведеного дослідження сформовано авторське бачення визначення сутності "соціально-економічний розвиток об'єднаних територіальних громад", що сприятиме більш чіткому розумінню цієї категорії. Виокремлено Характеристиками, які визначають соціально-економічний розвиток об'єднаної територіальної громади. Проведено оцінку динаміки процесу створення територіальних громад в Україні та виявлено можливості щодо створення нових громад. З метою розробки стратегії соціально-економічного розвитку об'єднаних територіальних громад, яка б відповідала вимогам сучасного бізнес-середовища, а також задовольняла очікування, які перед нею ставляться, здійснено систематизацію різних видів стратегій у класифікаційні групи, такі, як: стратегії розвитку, стратегії управління і використання ресурсів об'єднаних територіальних громад, гендерно-орієнтовані стратегії, стратегія боротьби, стратегії розвитку галузей економіки, стратегії розвитку сфер об'єднаних територіальних громад, стратегії діджиталізації, комунікаційно-інформативні стратегії, стратегії управління, євроінтеграційні стратегії. Розроблена класифікація стратегій соціально-економічного розвитку об'єднаних територіальних громад сприятиме більш точному формуванню стратегічних цілей, заходів та сприяти ефективному впровадженню і реалізації розробленої стратегії об'єднаних територіальних громад. Отримані результати проведеного дослідження виступають основою для наступних досліджень у частині забезпечення соціально-економічного розвитку об'єднаних територіальних громад.

Ключові слова: стратегія, соціально-економічний розвиток, сталий розвиток, об'єднані територіальні громади, класифікаційні групи стратегій.

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CROSS-BORDER APPROACH TO REGIONS' SMART SPECIALIZATION: EXPERIENCE OF THE EU MEMBER STATES

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Abstract. In the recent decade, the EU Member States have been actively implementing the regional development policy based on innovative strategies of smart specialization. However, lately, European researchers have been paying increasing attention to the issues of regions' capacity to overcome the boundaries of administrative units inside the country and abroad and to the need to consider regions in the context of their functioning among others, especially from the viewpoint of the growing role of their innovative networks in global value chains. That is why currently the EU is addressing the development of cross-border smart specialization strategies.

The paper aims to study the European experience on the functioning of cross-border innovation systems and joint strategic planning of cross-border regions' development based on smart specialization and to outline the opportunities to implement the EU experience of cross-border approach to smart specialization in cross-border regions of Ukraine with EU Member States.

The paper analyzes the views of foreign researchers on the links between innovation systems in cross-border space that constitute the theoretical basis of the study of cross-border smart specialization strategies, namely regarding the dimensions and level of their development. The research of European scientists on cross-border innovation systems in specific cross-border regions is examined, in particular on Spanish-French and German-French borders.

Directions of implementation of smart specialization projects in cross-border context under the EU programs and other EU instruments that support regions in cooperation for the elaboration of joint view of development with neighbouring economically, socially, culturally, and historically close regions are outlined.

The experience and methodology of the first cross-border smart specialization strategy for Spanish and Portuguese regions are studied in detail.

The opportunities to use the EU experience by several Western Ukrainian regions based on the joint smart specialization priorities with the neighboring EU states are outlined. For this purpose, 1) the RIS3 strategies of the regions of Poland and Romania adjoining Ukraine and Regional Development Strategies of respective Ukrainian regions were analyzed to detect similar smart specialization priorities; 2) the clusters in the mentioned regions were analyzed as main drivers of achievement of smart specialization goals to detect similar or complementary functioning areas.

Keywords: regional innovation systems, cross-border innovation systems, EU Member States, smart specialization, cross-border region, cross-border smart specialization strategy, RIS3, clusters.

JEL Classification: F02, O31, R11.

1. INTRODUCTION

In conditions of a deep economic crisis in the EU that occurred in the 2007-2013 program period, the endeavors of the EU Member States were focused on the search for ways to boost smart, sustainable, and comprehensive growth. Moreover, innovative growth has come into the spotlight. In particular, the Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions Europe 2020 Flagship Initiative Innovation Union was adopted in 2010 [1]. The document emphasizes the investment in research, innovations, and entrepreneurship for the most efficient use of the countries' capacity. The issues of innovative activity and investment are at the heart of Strategy 2020. The new 2014-2020 cohesion policy defines smart specialization as a strategic approach to boosting economic growth through efficient support for research and innovations. It has become the platform for joining the endeavors of regional and state authorities in the EU to develop innovative smart specialization strategies from the viewpoint of efficient use of structural funds and growing synergy between national and regional policies of the EU countries and the policy of the Community.

A region cannot exist separately in the modern world. To develop efficiently, it should take into account the factor of growing international cooperation both in production and sales as well as in research and innovation. Therefore, the regional innovation strategies for smart specialization (RIS3) will be the most successful if the regions are examined in the context of their functioning among other regions, especially from the viewpoint of the growing role of their innovative networks in the processes of integration into global value chains. The cross-border smart specialization strategies have been gaining much attention lately in the EU. One of them is already developed and is being implemented. Such strategies are grounded on the processes of data and information exchange, joint projects implementation, and development policies harmonization in various domains.

The EU-Ukraine Association Agreement stipulates that the latter should have brought its legislation in compliance with the EU legislation by 2025. The introduction of the smart specialization concept into the system of strategic planning of regional development is one of the required changes. The Resolutions of the Cabinet of Ministers of Ukraine № 931 and 932 as of 11 November 2015 were amended to create the legal ground to introduce the smart specialization approach into the process of strategic planning in Ukraine. The regional development strategies for the period by 2027 for all oblasts have been finalized already. Most Ukrainian oblasts are located close to the state border and the border itself and the phenomena it generates as well as similar features of economic and social systems on both sides of the border should have been taken into account. Yet, the analysis of regional development strategies for 5 Western oblasts of Ukraine that border the EU shows that although the cross-border cooperation is mentioned in them mostly in the context of joint implementation of projects and tourism, the priorities of smart specialization in the neighboring regions are not examined and the opportunities of using the similarities of the regions on both sides of the border to boost their innovative and sustainable development are overlooked. Meanwhile, Ukraine has experience of participating in cross-border strategies – the Cross-Border Cooperation Strategy of the Lubelskie Voivodeship, Lviv, Volyn and Brest Oblasts for 2014-2020 and the 2020 Strategy of the Development of Slovakian-Ukrainian Cooperation (Oriented at the Development of Cooperation between the Presov and Kosice Self-Governing Regions of Slovak Republic and Zakarpatska Oblast of Ukraine). Both of them are terminating this year. Therefore, it is essential to examine the experience of EU regions in developing cross-border smart specialization strategies and estimate them from the viewpoint of opportunity to be applied in Ukraine in strategic planning of cross-border and border regions' development.

The paper aims to examine the experience of the EU countries regarding the functioning of cross-border innovation systems and joint strategic planning of the development of cross-border regions based on smart specialization principles and to outline the opportunities to implement the EU experience of cross-border approach to smart specialization in cross-border regions of Ukraine with EU Member States.

2. THEORETICAL BACKGROUND

The research of cross-border innovation systems that constitutes the ground for cross-border smart specialization is rather new and starts in the current decade of the XXI century. K.-J. Lundquist and M. Trippl emphasize that the cross-border innovative systems should be considered as the most developed forms of transnational integration that are based on the previous less innovatively oriented development models. The authors suggest five dimensions of regional innovation systems (RIS). On this ground, they delineate the factors that impact the capacity of a cross-border region to carry out a joint innovative activity, which are the basis for determining three development levels of cross-border innovation systems [2].

The first RIS dimension is the science base/knowledge infrastructure. It is the subsystem of knowledge generation and diffusion through research, education, and technology transfer establishments. The second RIS dimension is the economic structure/specialization pattern. It is the subsystem of knowledge application that includes the companies and clusters functioning in the region. The knowledge, resources, and human capital flows between the two subsystems create the third dimension – the nature of linkages. The fourth dimension covers the policy structures – the regional policy in the area of innovations. The institutional set-up is the fifth dimension that represents the available institutional and socio-cultural situation in the region, including both formal and informal institutions.

The weakly integrated systems are the first development level of cross-border innovation systems. They are characterized by a low level of cross-border economic relations, in particular, the knowledge and innovations exchange. The authors argue that most Euroregions show this development level due to lacking synergy or poor use of the synergy. Lacking synergy is caused by substantial differences in scientific specialization, knowledge systems, and economic structures (cognitive distance). The authors also mention that the regions shouldn't be very close by the mentioned parameters because the cooperation won't generate new knowledge. The regions can be similar by the models of scientific or economic specialization but differ by innovative capacity or ability to absorb innovations. In this case, the results of cooperation can be distributed unequally (functional distance). Poor use of the synergy occurs mostly due to differences in institutional systems of the regions (institutional distance) and obstacles in the accessibility of the regions (physical distance). In this context, the authors emphasize the need for investment in cross-border infrastructure and the development of cross-border institutions.

The semi-integrated systems are the second level of development of cross-border innovation systems. They are characterized by the emergence of the system grounded on knowledge. According to the authors, although some clusters demonstrate the necessary level of cognitive and functional distance, most of them do not represent the complex cross-border innovation system despite being innovative. Compared to the first development level, the negative impact of physical distance is lower. There are more opportunities for the exchange of students, researchers, specialists, the establishment of scientific cooperation, and science-education-industry partnerships.

Strongly integrated systems are the highest development level of cross-border innovation systems. They are characterized by a strong knowledge, experience, and skills flows across the border that are generated by growing students and workers mobility, emerging innovative network links between the companies, and science-education-industry partnerships. The synergy comes from a high level of functional distance and optimal level of cognitive distance in business systems and knowledge bases. Such synergy occurs not in few but in many economic and scientific activity domains. The transport and communication infrastructure is well developed and contributes to high accessibility. There are joint institutions that are involved in overcoming the socio-institutional obstacles. They might not be directly related to innovative activity, but they create the necessary environment for the development of all cooperation areas. The joint solution of problems at the cross-border level becomes part of everyday life and is supported by society.

The research of the RIS dimensions continues in the studies of van den Broek and Smulders [3]. Yet, the researchers examine only certain dimensions or their parts, while the concept of RIS multidimensionality, in general, is underresearched.

Adi Weidenfeld argues that tourism is one of the key factors of the cross-border innovation systems' evolution because it impacts directly the development of transport and border infrastructure that reduces the border function as a physical barrier in the weakly integrated systems [4]. The issue of geographic delineation of innovation systems is studied by Doloreux and Parto [5]. Makkonen and Rohde [6] examine the issue of delineating the cross-border region only geographically rather than by the intensity of links, namely the innovative ones. There are several scientists studying the cross-border innovation systems by economic sectors, for example, van den Broek and Smulders [3] and Hansen [7].

In Ukraine, the development of national and regional innovation systems is addressed by Y. Bondaruk, S. Horblyuk, I. Mushenyk, A. Poruchnyk, S. Prohorchuk, L. Fedulova, etc. But the forming and functioning of cross-border innovation systems and elaboration of cross-border regions' strategies based on smart specialization require more attention and examination.

3. Results

Many European regions consider their geographical position as well as history and perspectives of cooperation with other regions when strategizing their development on the principles of smart specialization. In this regard, the perspective areas of cooperation with neighboring regions of a country, geographically close regions of adjoining countries, and even cooperation on the international scale are often covered by the RIS3 strategies. For example, the RIS 3 Strategy of S. Voivodeship defines 4 strategic partners to boost the innovative capacity of the region: Molopolskie and Opolskie Voivodeships, Moravian-Silesian Region of the Czech Republic, and Zylina Region of Slovakia. Three main directions of cooperation are defined: business or commerce, science, and implementation of the research results [8]. The first direction includes cooperation between organizations of entrepreneurs and clusters, joint initiatives on the intensification of trade operations, informing about legal and administrative documents on carrying out commercial activity abroad, and organizing economic forums, etc. The other two directions emphasize the need to increase the number of large strategic projects implemented mostly by universities, technological parks, and representatives of business or economic departments of local governments. Cooperation is primarily related to production technologies, non-traditional renewable energy sources, and ICT. All activities accomplished under these three directions are supported by mobility programs for students, academic staff, and company employees. Implementation of these directions is secured by the Tritia EGTC founded by Silesian Voivodeship, Moravian-Silesian Region of Czech Republic and Zylina Region of Slovakia, in the framework of cooperation agreements between 11 universities at the Poland-Czech Republic-Slovakia border on innovative activity in PROGRES3 consortium, and between Polish and Czech universities in the framework of the Conference of Rectors of Silesian Universities.

Joint implementation of competitive advantages with regions similar or complementary by their specialization areas is seen as one of the ways to achieve the smart specialization goals. North Holland (the Netherlands) traditionally actively cooperates with Scane County of Sweden and northern regions of Germany in realizing similar smart specialization priorities. On an international scale, in 2015, North Holland signed a bilateral agreement with Romanian North-East Region with the view to jointly react to social challenges and boost the economic growth of regions by creating regional innovative incubators and living labs that are the tools to implement smart specialization priorities providing the companies with the space to exchange ideas, carry out the innovative activity, and receive various types of support [9].

Flanders region of Belgium was the pioneer of multi-regional cooperation for smart specialization by launching in 2013 the Vanguard Initiative "New Growth through Smart-Specialization" [10]. It is focused on consolidating the authorities of EU regions to search for ways to impact the European employment and economic growth policies, namely in innovations and industrial policy. The regions work to transform regional partnerships and clusters defined by the smart specialization strategies into world-level clusters that can compete on an international scale. In the context of the large-scale international cooperation of regions to implement the smart specialization goals, the High Tech Farming partnership should be mentioned. It was initiated by Italian Toscana under the Agri-Food Thematic Smart Specialization Platform. The Partnership consolidates 26 EU regions and one country to develop joint activities on the acceleration of the implementation of advanced technologies that can boost the activity of farms. Within its framework, the complementarity areas among the partners are defined, information on perspectives and needs of regional actors across technological sectors is collected, many interested parties from various activity types, including clusters, are attracted, and a lot of micropartnerships are created to participate in funding programs according to joint or similar smart specialization priorities [9].

Clusters are the key tools used by European regions to achieve the goals of smart specialization. Their role is mentioned in almost every RIS3, including in the context of overcoming the borders of one region and even the state to consolidate the competitive advantages of territories. No wonder that Flanders is the region that promotes the multi-regional smart specialization by the development of clusters. It is due to the fact that its RIS3 is fully based on the regional clusters policy that is horizontal and vertical (for spearhead clusters). Another region grounding its smart specialization policy on clusters is Lapland (Finland) [11]. Due to active EU policy that encourages clusters to overcome the internal borders of the regions and countries, a lot of them form cross-border and international partnerships that in time turn into cross-border and international clusters. The most known are those in pharmaceuticals and medical technology: the Medicon Valley with partners from Denmark and Sweden that consolidates over 85 biotechnological, 27 pharmaceutical, 166 medtech companies, scientific parks, 6 incubators, 97 research organizations, 32 hospitals, 12 universities, 32 labs, 25 investment companies, and 17 civil organizations to treat neural disorders, cancer, and diabetes; and the Bio Valley that consolidates over 600 pharmaceutical companies and 14 scientific parks as well as numerous economic development agencies and civil organizations from adjoining regions of France, Germany, and Switzerland. "BIG-Cluster" functions at the Dutch-Belgian-German border in the bio-renewable energy domain. Another new initiative at this border section is the Top-Technology-Cluster. The large network clusters in Europe include The European Railway Clusters Initiative (ERCI) that covers 14 innovative clusters from 10 countries and the Transnational Renewable Energy Cluster Danube (TREC Danube) that consolidates regional clusters in renewable energy and bioeconomy [12].

In the last two program periods, many European regions attempted to attract EU funding to examine the opportunities of cooperation with neighboring regions to boost the innovative and scientific capacity of their territories. One of the projects is KNOWHUB (regions from Poland, Hungary, Spain, France, Austria, Germany, Bulgaria) under INTERREG IVC, which organized the activities on experience and knowledge exchange for more efficient implementation of S3 strategies [13]. Another project is TR3S implemented by regions from Finland, Germany, Poland, Romania, Italy, Estonia, Great Britain, Hungary, and Spain to detect the unique features of each region and its competitive advantages [14]. France and Spain are implementing the project aCCeSS – Cross-Border Cooperation for Smart Specialization under the INTERREG Poctefa 2014-2020 to promote the transfer of knowledge and technology from research institutions to business with the view to expand the capacity and introduce innovations [15]. In the program period 2007-2013, the project "Smart Specialization" of the regions from Greece and Bulgaria stipulated examining of available competitive advantages in neighboring regions of the country and their innovative and scientific capacities to create the ground for writing joint strategies oriented at innovations and entrepreneurship in the following program periods [16].

It is worth mentioning that the initiatives regarding the elaboration of joint development strategies emerge mainly in the border regions that have the significant experience of cooperation within Euroregions, primarily due to the fact that such regions mostly have close internal links and have joint managing bodies. Mikel Navarro, the researcher of cross-border links between the Euskadi Region (the Basque Country) and neighboring regions, emphasizes the innovation and knowledge cooperation as a precondition for joint strategic planning of their development [17]. Being the member of EGTC

Nouvelle-Aquitaine-Euskadi-Navarra, the region participated in projects related to innovations in cross-border space, its strategic and program documents and institutional environment of innovations support in the region and those of the other regions-members of the EGTC have similar features. The region is also active in promoting cross-border innovative cooperation in Europe. Therefore, the Euskadi academic community is turning to developing the cross-border smart specialization strategies with adjoining regions of the neighboring countries in correspondence with the respective thematic and horizontal S3 priorities.

Academic community is also emphasizing the readiness of another cross-border region in Europe to implement a joint strategic approach to its development as an integrity – Upper Rhine on the border between Germany, Switzerland, and France. For example, E. Muller, A. Zenker, M. Hufnagl, J. Alain Heraud, E. Schnabl, T. Makkonen, H. Kroll [18] outline the issue of innovation policies coordination in Upper Rhine as a ground for implementing the joint smart specialization concept. From the viewpoint of the decades-lasting active cooperation in the region, the joint approach to smart specialization can promote the further deepening of existing links across borders. The results of the sociological survey in these regions show that France and Germany have similar socio-economic development trends, governance systems, and political traditions in the context of smart specialization development. The regions Alsace and Baden-Württemberg have very close cultural, historical, and economic links. They are characterized by high level of innovations development and powerful scientific capacity. The regions also use joint approaches to innovation policy and are specialized in similar economic activities. Therefore, the grounds for elaborating the S3 for the cross-border region are quite strong.

The most successful in joining efforts to boost socio-economic development based on smart specialization are Spain and Portugal, which have produced the first cross-border smart-specialization strategy [19]. With the view to improve the efficiency of the use of various financial sources, including the regional operational programs and cross-border cooperation programs, the regional authorities of Galicia (Spain) and Norte (Portugal) started in 2014 the joint process of strategic planning. They established a cross-border Working Group consisting of the Galician Innovation Agency and the Regional Coordination and Development Commission of the North. It generated a joint view of innovative development and harmonization of its goals as well as joint priorities, necessary activities, and the system of indicators to monitor the cooperation efficiency.

The Strategy was preceded by an over 30-year history of cooperation between these regions in the framework of the Euroregion Galicia-Northern Portugal, which was one of the first to become a legal entity and is now functioning as an EGTC. Local authorities and cross-border cooperation participants are also members of 2 more EGTCs. In the decades of cooperation, many joint projects and activities were implemented in innovations, research, and business, generating the necessary background for detecting similar features and priorities of the regions' development. Among those most essential for innovative development is the common education platform that consolidates 6 universities, the emergence of the textile cluster, and the founding of cross-border development, cooperation and business services center CECOTRAN, which is the legal entity and functions to create strong networks and platforms for cooperation between small and medium companies and exchange of data, experience, and development initiatives. The importance of writing the joint strategy was emphasized in the 2014 Joint Investment Plan of the Euroregion Galicia – Northern Portugal under the Priority Axis 1 "An innovative Euroregion advocating innovation and transfer".

2015-2020 Cross-Border Smart Specialization Strategy of Galicia-Northern Portugal is based on recommendations provided by RIS3 Guide. Therefore, in accordance with the Guide, the Strategy was developed in 6 key stages. The first stage included a detailed analysis of regions' cooperation in the Euroregion and in research and innovations. The second stage stipulated the diagnostics of innovation and research system of the Euroregion. Production specialization in the Strategy is calculated by the Relative Production Specialization Index by comparing a region's value with the value of the country in general in each economic sector. Technological specialization is determined based on the data of the Innovation Observatory of Galicia on participation in projects by the Sectoral Programmes at the regional level, R&D grants from public institutions at the national level (namely, the Technological

Development Centre of Spain) and in the Seventh Framework Programme at the international level. Technological specialization for Northern Portugal was calculated by comparing the Relative Technological Specialization Index in comparison with OECD countries. Scientific specialization was determined by participation in project calls at regional, national, and international levels.

At the third stage, the shared vision and principles of regions' development, as well as challenges faced by the cross-border region in convergence with other EU regions, were developed. In this regard, the survey of main entities and participants of innovation activity was carried out at both sides of the border to reveal their readiness for cross-border cooperation and to detect the EU programs they would like to participate in.

The fourth stage is directly related to the selection of cooperation areas. Based on analysis carried out at the second stage and diagnostics carried out for preparation of RIS3 of Galicia and Northern Portugal, 6 strategic cooperation areas were selected for these regions. They are the marine and biomass energies, agri - bio, food industry, processing industry, aeronautics, creative industries, ICT and tourism, health and active aging. The fifth stage outlines the process of Strategy implementation and defines the entities responsible for the process. And the final sixth stage covers the methodology of evaluation and monitoring of the Strategy implementation.

European Union has developed the system of tools to encourage regions to cooperate in the development of joint strategic documents and achievement of practical results in a synergy of priority directions to stimulate economic development. They include the interactive tool for Regional Benchmarking that helps identifying regions with similar structural conditions in terms of innovative development (social, economic, technological, institutional, and geographical features); Eye@RIS3 database that provides the review of priorities of regional and national smart specialization strategies and opportunity for the regions to position themselves, find their unique niches, and search for partners for cooperation; and interactive application for the visualization of international trade flows and analysis of regions' competitive positions [20]. There is also a range of specific EU tools for the regions that ground their smart specialization policies on the development of clusters.

4. Discussion

To reveal if there are grounds for cross-border regions of Ukraine to apply a smart specialization approach to strategizing their development, we focus on two of them – Ukraine-Poland and Ukraine-Romania. For this purpose, 1) the RIS3 strategies of the regions of Poland and Romania adjoining Ukraine and Regional Development Strategies of respective Ukrainian regions were analyzed to detect similar smart specialization priorities; 2) the clusters in the mentioned regions were analyzed as main drivers of achievement of smart specialization goals to detect similar functioning areas.

In this regard, it is worth mentioning that Ukraine started to apply the smart specialization principles in strategizing only this year, so we had to compare RIS3 of European regions from the current program period with Regional Development Strategies of Ukrainian regions for the next 2021-2027 period. Moreover, although the smart specialization approach was applied in Ukraine, it was not completely based on the one used in the EU due to the lack of necessary statistical data. The priority areas in Ukraine were determined according to the national Classifier of Economic Activity Types, while priorities in the EU are mostly cross-sectoral, therefore – much broader than in Ukraine.

In addition to this, out of the neighboring EU countries (Poland, Slovakia, Hungary, Romania), Slovakia and Hungary, in the current program period, have smart specialization strategies only at the national level. Therefore, similar priorities were analyzed for two cross-border regions – Ukraine-Poland and Ukraine-Romania. The results of the analysis are presented in Tables 1 and 2.

Region of the neighboring state	Smart specialization priority of the region of the neighboring state	Similar priorities of Ukrainian regions within the respective cross-border region
Lubelskie voivodship	Bioeconomy. The use of agricultural and industrial biotechnology, nanotechnology, biophysics in the value chains of sustainable primary production, bio-resources and food production in the sectors of pharmaceutical, energy, eco-business, agro-food, chemical, paper, wood and furniture, information services.	Food production, chemical production, manufacturing paper and cardboard products, furniture production (Lvivska oblast). Stimulating the development of balanced eco-friendly food (Volynska oblast).
	IT & automation. The use of mechatronics, smart buildings, control systems, industrial automation and mobile application in the value chains of manufacturing, advanced products and production systems and system services in the sectors of software and IT consultancy, information services, manufacture of electrical equipment, machines, devices, computers, electronic and optical products	IT is defined as a perspective industry for smart specialization (Lvivska oblast).
Podkarpackie voivodship	Automotive. Manufacture of cars, buses, minibuses, motorcycles, tractors, semi-trailers, trailers; manufacture of rolling stock, surface and underground, as well as overhead railways; manufacture of products which are ultimately used in the automotive sector, including engines; research and development directly related to the wider automotive sector, aimed at implementing research results in production and society.	Production of railway locomotives and rolling stock, production of machines and equipment for agriculture and forestry, production of assemblies, details, and devices for vehicles (Lvivska oblast).
	Quality of life. Mobility (sustainable transport); climate and energy (renewable energy sources and related technologies); sustainable tourism (excluding mass tourism); Health, food, nutrition, innovative technologies, processes and products of the agri-food sector, highest biological and health quality.	Food production (Lvivska oblast).

Tab. 1. Similar types of economic activity defined as smart specialization priorities by RIS3 and Regional Development Strategies in Ukraine-Poland cross-border region. Source: developed by authors based on [21-24].

The analysis provided in Tables shows that Lvivska and Chernivetska oblasts have several types of economic activity that fall within the scope of smart specialization priorities of the adjoining regions from the neighboring countries within the respective cross-border regions. Volynska and Ivano-Frankivska oblasts also have opportunities to join efforts with neighboring regions in bioeconomy and advanced production technologies, respectively. Meanwhile, Zakarpatska oblast, being geographically in both cross-border regions, doesn't have the types of economic activity that are the points of common interest in terms of smart specialization with the regions from the neighboring states.

Region of the neighboring state	Smart specialization priority of the region of the neighboring state	Similar priorities of Ukrainian regions within the respective cross-border region
North-West Romania	Advanced Production Technologies. Encompasses economic activities related to the production of machinery and equipment which account for high concentration of companies and turnover in the region. Specialization niches include: innovative machinery and equipment in robotics, mechatronics, automation, advanced manufacturing and processing, additive manufacturing / rapid prototyping; innovative machinery and equipment for energy production using renewable sources or generating less pollution; machinery, equipment and solutions for energy efficiency.	Production of electric engines, generators, power converters, energy distribution and control equipment, production of machinery and equipment of general use (Ivano-Frankivska oblast).
	Agri-Food. The sector is well anchored in the regional economy with a significant number of employees and a large number of firms. Despite low income levels it has been supporting the development of rural economy given that almost half of the region's population lives in rural areas. Specialization niches: production of safe, healthy, affordable and nutritionally optimized food products based on local breeds and crops, culinary traditions and by applying the principles of High Nature Value Farming, sustainable and precision agriculture, as well as new veterinary and agricultural genetics; and production of functional foods.	Food production (Chernivetska oblast).
North-East Romania	Textile - clothing sector. (advanced biomaterials, functional textiles, medical textiles, smart textiles for interconnecting clothing, biomaterials, technical textiles, textile composite structures, knitted structures with thermal properties, mechanical protection knits, clothing synergistic).	Textile production (Ivano-Frankivska oblast). Textile production (Chernivetska oblast).
	Healthy Ageing, Healthy Living and Tourism. Adventure and active tourism, healthy ageing, cultural tourism.	Tourism and recreation development (Chernivetska oblast).
	Agro-food sector. Agronomy, crop science, food science, biotechnology, soil research, nano-materials for protein separation).	Food production (Chernivetska oblast).

Tab. 2. Similar types of economic activity defined as smart specialization priorities by RIS3 and Regional Development Strategies in Ukraine-Romania cross-border region. Source: developed by authors based on [21], [25], [26].

There are four cross-border clusters with participants from Ukraine. All of them are in the Ukraine-Poland cross-border region. Two clusters are in tourism, one in innovations and one in statistics. Yet, the efficiency of their activity is doubtful. At least, information on their activity is hardly accessible as there are no official websites or social media or even any updated links at the websites of clusters participants. Nevertheless, the analysis of regional clusters in Ukraine-Poland and Ukraine-Romania cross-border regions shows that many of them have similar or complementary functioning areas. Some of them and the initiatives to establish the clusters that are at the stage of finalization are presented in Table 3.

Location	Cluster	Similar clusters and initiatives by the types of activity in Ukrainian oblasts within the respective cross-border region
Lubelskie voivodship	Lublin Medicine-Medical and Wellness Cluster	Medical Tourism Cluster, Biotech & Pharma Cluster (Lvivska oblast)
Podkarpackie voivodship	East Automotive Alliance	Automotive cluster initiative (Zakarpatska oblast)
	Polish automotive group	Automotive cluster initiative (Zakarpatska oblast)
North-East Romania	Astrico Nord-Est Textile Cluster	Cluster of Popular Art Industries "Suzirya" (Ivano-Frankivska oblast), wedding industry cluster initiative (Chernivetska oblast)
North-West Romania	Agro Transylvania Cluster	Apple Cluster "Bukovyna" (Chernivetska oblast)
	Eco-Innovation Cluster for Sustainable Environment	Precarpathian Eco-Energy Cluster (Ivano-Frankivska oblast)
	Transylvania Energy Cluster	Precarpathian Eco-Energy Cluster (Ivano-Frankivska oblast)
	Transylvania Creative Industries Cluster	Cluster of Popular Art Industries "Suzirya" (Ivano-Frankivska oblast), wedding industry cluster initiative (Chernivetska oblast)

Tab. 3. Some clusters and initiatives in the regions of Poland and Romania adjoining Ukraine that function in the types of activities related to those of clusters in the respective Ukrainian oblasts within the respective cross-border regions. Source: developed by author based on [27], [12].

In addition to these clusters, there are also other ones in Ukrainian oblasts that function in the types of economic activity that are the priorities of smart specialization for respective EU regions. They include Lviv IT Cluster and Lutsk IT Cluster (ICT is the priority of both Lubelskie and Podkarpackie voivodeships' RIS3), Energy Cluster "Innovation Energy" (Low-carbon emission energy is the priority of Lubelskie voivodeship RIS3), ClusterBit and IT Cluster Ivano-Frankivsk (ICT is the priority of North-West Romania). Moreover, we should mention the initiative of creating the wood processing cluster in Chernivetska oblast as it correlates with North-West Romania's smart specialization priority "New Materials - Furniture, Paper and Packaging, Plastics and Metal Processing".

Therefore, there are preconditions for Ukrainian clusters to overcome the national border to cooperate with existing clusters in the EU and with the companies in similar types of activity to establish new partnerships based on similar specialization areas. In this regard, our research of similar smart specialization priorities shows that there are points of common interest for the territories in cross-border regions of Ukraine with the EU Member States. Therefore, there are grounds for developing a joint cross-border approach to strategizing in these cross-border regions.

5. Conclusions

The support the EU provides to the regions to promote their cooperation with the view to develop a shared vision of co-existence with neighboring regions that are similar in economic, social, cultural, and historical aspects based on smart specialization principles, the practical steps already accomplished towards this end, and the interest in the issue on the part of scientists and researchers testify to the fact that there will be much more initiatives regarding the creation of cross-border smart specialization partnerships and strategies in the next program period.

As for Ukraine, currently, the approaches to the development of strategic documents are undergoing substantial changes. The strategies of oblasts' development for 2021-2027 are already grounded on the principles of smart specialization. Yet, the comparing of these documents with those developed in the EU regions is a difficult task. Ukrainian strategies are quite different, in the first place because of the lack of necessary data to calculate the specialization according to the EU methodology. Nevertheless, one can argue that the first attempts to apply the smart specialization approach to strategic planning are quite successful, and the priorities are defined in correspondence with the regions' development, although they are much narrower than the cross-sectoral priorities of EU regions. It is a step towards involvement in global value chains and entrance to European and global markets, which is rather doubtful without the consideration of smart specialization as an advanced tool of regional development planning. It is also a chance to gain access to structural and investment funds of the European Union.

The first attempts in our paper to outline the grounds for cross-border regions of Ukraine to apply a smart specialization approach to strategizing their development show that border regions in Ukraine-Poland and Ukraine-Romania cross-border regions have the points of common interests in terms of smart specialization priorities. Moreover, the clusters, which are the main tool of smart specialization priorities implementation in the EU, are present at adjoining territories, and the types of economic activity they function in are similar or complementary to those located on the other side of the border. It is the basis for the establishment of cluster partnerships across the borders. The close cross-border cooperation links in these cross-border regions do not raise any questions either, starting from historical retrospective up till nowadays, when there are common governing structures operating under the Euroregions and numerous examples of projects implemented under the CBC Programs that include activities in innovations, research, education, and SME support. These are the factors that should be considered as preconditions to elaborate on the strategies of cross-border regions' development based on the principles of smart specialization in the EU-Ukraine cross-border space.

REFERENCES

[1] *Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions*. Europe 2020 Flagship Initiative Innovation Union, SEC 1161 (2010). Available at: https://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication_en.pdf

[2] Lundquist K.-J., Trippl M. Distance, Proximity and Types of Cross-Border Innovation Systems: A Conceptual Analysis. *Regional Studies*, **3** (47) (2013), 450–460. doi: 10.1080/00343404.2011.560933

[3] Van den Broek J., Smulders H. Institutional Hindrances in Cross-border Regional Innovation Systems. *Regional Studies. Regional Science*, **2** (1) (2015), 115–121. doi: 10.1080/21681376.2015.1007158

[4] Weidenfeld A. Tourism and cross-border regional innovation systems. *Annals of Tourism Research*, **42** (1) (2013), 191-213. doi: 10.1016/j.annals.2013.01.003

[5] Doloreux D., Parto S. Regional innovation systems: Current discourse and unresolved issues. *Technology in society*, **27** (2) (2015), 133–153. doi: 10.1016/j.techsoc.2005.01.002

[6] Makkonen T., Rohde S. Cross-border regional innovation systems: conceptual backgrounds, empirical evidence and policy implications. *European Planning Studies*, **24** (9) (2016), 1623–1642. doi: 10.1080/09654313.2016.1184626

[7] Hansen T. Bridging regional innovation: cross-border collaboration in the Oresund Region. *Geografisk Tidsskrift-Danish Journal of Geography*, **113** (1) (2013), 25–38. doi: 10.1080/00167223.2013.781306

[8] Regional Innovation Strategy of the Śląskie Voivodeship for the years 2013-2020. Available at: https://s3platform.jrc.ec.europa.eu/documents/20182/231100/PL_Slaskie_RIS3_Final.pdf/f8fdfcad-5a28-4d0a-bd89-c5ee25ee974a

[9] *Smart Stories. Implementing smart specialization across Europe.* Available at: https://ec.europa.eu/jrc/en/publication/thematic-reports/smart-stories-implementing-smart-specialisation-across-europe

[10] *The Vanguard Initiative*. Available at: https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/link/vanguard-initiative

[11] Prytula Kh.M., Demedyuk O.P. Tools of implementation of smart specialization strategies in the EU Member States. *Socio-Economic Problems of the Modern Period of Ukraine*, **2** (142) (2020), 62–70. doi: 10.36818/2071-4653-2020-2-9

[12] Demedyuk O.P. Perspectives of the development of cross-border clusters in the border oblasts of the Western Ukraine. *Regional economy*, **2** (96) (2020), 58-71. doi: 10.36818/1562-0905-2020-2-5

[13] *The KNOW-HUB project*. Available at: http://know-hub.eu/about-know-hub/the-know-hub-project.html.

[14] *TR3S.* Available at: http://www.tr3s-project.eu/information/

[15] *The project.* Available at: https://interreg-poctefa-access.com/en/home-en/

[16] *Project - Smart Specialization*. Available at: https://www.keep.eu/project/9647/smart-specialization

[17] Navarro M. *Regional Cross-Border Cooperation and Ris3.* European Territorial Framework Virtual Library, 2018. Available at: http://projects.mcrit.com/foresightlibrary/attachments/article/1155/Navarro%20(2018)%20Regional%20Cross-Border%20Cooperation%20and%20Ris3.pdf

[18] Muller E., Zenker A., Hufnagl M., Heraud J.A., Schnabl E., Makkonen T., Kroll H. Smart specialisation strategies and cross-border integration of regional innovation systems: Policy dynamics and challenges for the Upper Rhine. *Environment and Planning C Government and Policy*, **35** (4) (2017), 684–702 doi: 10.1177/0263774X16688472

[19] *Cross-Border Smart Specialization Strategy of Galicia-Northern Portugal*. Available at: http://www.ris3galicia.es/wp-content/uploads/2016/07/RIS3T_INGLES.pdf

[20] *Creating Growth through Trans-national Cooperation and Value Chains.* Available at: https://s3platform.jrc.ec.europa.eu/documents/20182/154989/Smart+Specialisation+Creating+Growth+through+Trans-national+cooperation+and+Value+Chains/f3587cf2-c511-42a4-b559-a89d511a7e38

[21] *Eye@RIS3: Innovation Priorities in Europe*. Available at: https://s3platform.jrc.ec.europa.eu/map

[22] *2021-2027 Lvivska Oblast Development Strategy*. Available at: https://www.minregion.gov.ua/napryamki-diyalnosti/derzhavna-rehional-na-polityka/strategichne-planuvannya-regionalnogo-rozvitku/regionalni-strategiyi-rozvytku-na-period-do-2027-roku/strategiya-rozvytku-lvivskoyi-oblasti-na-period-2021-2027-rokiv/

[23] *2027 Volynska Oblast Development Strategy*. Available at: https://www.minregion.gov.ua/wp-content/uploads/2020/04/volynska-strategiya-rozvytku-volynskoyi-oblasti-na-period-do-2027-roku.pdf

[24] *2021-2027 Regional Zakarpatska Oblast Development Strategy*. Available at: https://www.minregion.gov.ua/napryamki-diyalnosti/derzhavna-rehional-na-polityka/strategichne-planuvannya-regionalnogo-rozvitku/regionalni-strategiyi-rozvytku-na-period-do-2027-roku/regionalna-strategiya-rozvytku-zakarpatskoyi-oblasti-na-period-2021-2027-rokiv/

[25] *2021-2027 Ivano-Frankivska Oblast Development Strategy*. Available at: https://www.minregion.gov.ua/napryamki-diyalnosti/derzhavna-rehional-na-polityka/strategichne-planuvannya-regionalnogo-rozvitku/regionalni-strategiyi-rozvytku-na-period-do-2027-roku/strategiya-rozvytku-ivano-frankivskoyi-oblasti-na-2021-2027-roky/

[26] *2027 Chernivetska Oblast Development Strategy*. Available at: https://www.minregion.gov.ua/napryamki-diyalnosti/derzhavna-rehional-na-polityka/strategichne-planuvannya-regionalnogo-rozvitku/regionalni-strategiyi-rozvytku-na-period-do-2027-roku/strategiya-regionalnogo-rozvytku-cherniveczkoyi-oblasti-na-period-do-2027-roku/

[27] *List of cluster organizations*. Available at: https://www.clustercollaboration.eu/cluster-list

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Демедюк Ольга, Притула Христина. Транскордонний підхід до смарт-спеціалізації регіонів: досвід країн-членів ЄС. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 36–48.

Протягом останнього десятиліття країни Європейського Союзу активно реалізовують політику регіонального розвитку на основі інноваційних стратегій смарт-спеціалізації. Проте останнім часом європейські дослідники звертають все більше уваги на проблематику дослідження потенціалу регіонів не лише в межах адміністративних одиниць однієї країни, а з врахуванням потенціалів розвитку сусідніх регіонів, як в межах, так і за межами країни. Також важливо вивчати регіони в контексті їх розвитку як елементів більш складних систем, особливо з точки зору посилення ролі їхніх інноваційних мереж у процесах інтеграції до глобальних ланцюгів вартості. Тому питання розробки транскордонних стратегій смарт-спеціалізації є на порядку денному у ЄС.

Метою статті є узагальнення досвіду країн ЄС щодо функціонування транскордонних інноваційних систем та стратегічного планування розвитку транскордонних регіонів на основі смарт-спеціалізації та окреслення можливостей імплементації досвіду ЄС у застосуванні підходу смарт-спеціалізації до визначення пріоритетів розвитку транскордонних регіонів України з країнами-членами ЄС.

Проаналізовано наукові розробки закордонних дослідників щодо взаємозв’язків між інноваційними регіональними системами у транскордонному просторі, які слугують базисом для розробки транскордонних стратегій смарт-спеціалізації, зокрема в контексті вимірів та рівнів їх розвитку. Узагальнено особливості функціонування транскордонних інноваційних систем у конкретних транскордонних регіонах, зокрема на іспансько-французькому та німецько-французькому кордонах.

Окреслено напрямки реалізації проектів щодо смарт-спеціалізації в транскордонному контексті за програмами ЄС та наведено інші інструменти ЄС щодо підтримки розвитку регіонів для розробки спільного бачення розвитку з сусідніми економічно, соціально, культурно та історично близькими регіонами.

Вивчено досвід та методологію написання першої транскордонної стратегії смарт-спеціалізації для іспанських та португальських регіонів.

Проаналізовано перспективи застосування кращих практик ЄС деякими областями Західного регіону України на основі подібних сфер спеціалізації. З цією метою здійснено порівняння пріоритетів стратегій смарт-спеціалізації регіонів Польщі та Румунії, що межують з Україною, та стратегій розвитку відповідних українських областей та виявлено наявність кластерів як основних інструментів досягнення цілей смарт-спеціалізації з подібними чи комплементарними сферами діяльності по обидва боки державного кордону.

Ключові слова: регіональні інноваційні системи, транскордонні інноваційні системи, країни Європейського Союзу, смарт-спеціалізація, транскордонний регіон, транскордонна стратегія смарт-спеціалізації, регіональні інноваційні стратегії смарт-спеціалізації, кластери.

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DETERMINATION OF FINANCIAL FACTORS IN THE LATEST THEORIES OF ECONOMIC GROWTH OF TERRITORIAL COMMUNITIES

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Abstract. In today's modern circumstances ensuring the economic growth of territorial communities requires theoretical redefining and additional research, since new challenges have negatively affected the well-being of the population and ensuing progress.

The purpose of the article is to determine financial factors in the latest theories of economic growth of territorial communities.

Scientific approaches to the definition of “territorial community” are generalized, own approach is offered and the main features of territorial community (territorial, natural, social-psychological, historical-cultural, organizational-functional, political, economic) are substantiated. Emphasis is placed on the need for a new theoretical approach to the development of territorial communities based on the synthesis and combination of basic guidelines and principles of modern scientific concepts and models, their interpretation in the context of local development. The latest theories of economic growth are studied, including: the theory of endogenous growth, inclusive development and the theory of sustainable development (E. Ostrom's concept of community resource management is highlighted). It is substantiated that the model of endogenous growth is focused on reducing inequality of economic development through the use of internal factors, mechanisms of management and management of the territory. There are two vectors of achieving inclusive development of territorial communities: internal - maximum involvement of community members in the process of its development; external - ensuring access of members of the territorial community to the opportunities provided by more developed communities. It is emphasized that the key idea in E. Ostrom's research is to achieve efficiency and substantiation of ways of community management of common resources. Within the framework of the theory of inclusive development, a review of the concept of financial inclusion, which raises the issue of community development – “banking deserts”. The existence of interdependence of perception of members of territorial communities – “banking deserts” of opportunities and prospects of obtaining banking services is indicated, which requires the involvement of theoretical foundations of behavioral economics in the study of this issue. The factors of economic growth of territorial communities are systematized, which are united into five groups: natural, factors of human development; social, production and financial. The financial factors of economic growth of territorial communities include: budget; investment, inflation, monetary. The expediency of applying the ideas of the latest theories of economic growth in the process of analyzing financial factors is substantiated.

Keywords: territorial community, financial factors of economic growth, endogenous growth, inclusive development, sustainable development, common resources, financial inclusion.

JEL Classification: 011, 016.

1. INTRODUCTION

The new challenges caused by the consequences of the pandemic and the socio-economic crisis had a negative impact on the welfare of the population, exacerbated a number of economic problems of further functioning and progress of Ukraine as a whole and newly formed communities, that have entered a fundamentally new phase of development (including through the reform of administrative and financial decentralization). On the other hand, in Ukraine, ensuring the financial and managerial capacity of territorial communities is significantly complicated by the deep institutional crisis and the preservation of established hierarchical relations at all levels. The sensitivity of the economy of territorial communities to these preconditions is increased by its underdevelopment and the problem of situational motivation in the behavior and actions of economic entities, which is not focused on strategic long-term community development and sustainable networking as the basis of its economic and social development.

This actualizes the issues that were mentioned above and indicates the urgent need for theoretical comprehension of the issue of economic growth of territorial communities in the new conditions.

2. THEORETICAL BACKGROUND

Due to its socio-economic significance, the outlined topics are in the focus of scientific research of representatives of economic and financial science. Thereby, one of the fundamental models of economic growth of the territory in modern conditions is the theory of endogenous scientific and technological progress of P. Romer, in which scientific and technological progress is “a factor of economic growth generated by internal causes” [1], and economic growth directly depends on the amount of human capital, concentrated in the field of knowledge acquisition. The factors of economic growth in this theory are knowledge and information, which determine the development of innovation, scientific and technological progress and the new state of human capital.

P. Romer's ideas were developed by World Bank experts D. Chen and H. Ki in the theory of knowledge and endogenous growth [2]. Using a two-sector model of a closed economy (including the manufacturing sector and the research and development sector), based on the application of the Cobb-Douglas function, which reflects the dependence of changes in productivity on certain factors, the authors link economic growth with increasing accumulation of financial resources in human capital development.

The issue of using financial resources to increase the level of human capital as a basis for economic growth of the territory is widely considered in recent decades and is the subject of numerous scientific discussions. According to conclusions of the World Bank, “empowerment results in the ability of the poor to influence government institutions that determine their living conditions by strengthening their participation in political processes and decision-making at the local level. And that means removing barriers – political, legal and socio-cultural – and increasing the assets of the poor so that they can effectively enter the markets” [3].

Thus, the hypothesis of the impact of the level of human capital development on the economic growth of the territory was developed by R. Birochy and M. Pozhebon in their proposed concept of critical financial education in the context of improving the financial inclusion of the entities of the community economy as one of its economic growth factors [4]. The empirical study was conducted by a municipality in Brazil, where providing community residents with access to information and communication technologies has resulted in significant socio-economic changes. After collecting data through surveys and using the method of coding economic information, scientists have concluded that financial education is the driving force of financial inclusion of low-income entrepreneurs and ensuring their access to financial resources.

Theoretical and methodological development of the issues raised by foreign and domestic scientists is carried out mainly at the regional, national and international levels. Despite significant developments, the theoretical aspects of the development of territorial communities, the definition of the basic principles and factors of their sustainable progress in conditions of uncertainty have not been properly presented, and therefore require in-depth study.

3. Research Objective, Methodology and Data

The purpose of the article is to determine financial factors in the latest theories of economic growth of territorial communities. The object of research in this article are the latest theories and factors of economic growth and long-term development of territorial communities. The methodological basis of this study are the fundamental provisions and principles of the theory of endogenous growth, sustainable and inclusive development, a number of domestic and foreign empirical studies on this issue. A set of specific methods of scientific knowledge, namely: logical generalization, analysis, synthesis, scientific abstraction, historical approach provided the opportunity to realize the integrity of scientific research.

4. Results and Discussion

The decentralization reform has enabled territorial communities to become a full-fledged subject of territorial management by obtaining the appropriate powers and resource base, which provides for the responsibility of local governments for the socio-economic development of the territory.

The study of the theoretical foundations of the development of territorial communities necessitates the definition of the essence of this definition. Therefore, the generalization of scientific approaches to its understanding suggests that the territorial community should be understood as a naturally formed human community organized in a certain area, characterized by a set of permanent ties and common interests in their livelihood and socio-economic development. At the same time, emphasizing the role of the territorial community in the context of its administrative-territorial determination as a subject of administrative relations in the system of state formation, it should be considered as a primary subject of local self-government with self-formed governing bodies endowed with the rights and responsibilities to address issues of local significance, which is the representative of the local community in the political arena and the owner of communal property in the relevant territory.

This approach to the interpretation of the category "territorial community" allows you to systematize the set of its explicit features:

– territorial - a territorial community is formed on a certain territory;

– natural - territorial community is formed and developed on the basis of self-organization, social and economic activity of its members and the need for constant development, following the principle of self-regulation;

– socio-psychological - territorial community exists subject to self-identification of each member of the community as part of it and awareness of the commonality of their interests. The community is first and foremost a system of constant communicative connections between members of the community;

– historical and cultural - the community exists and develops over time, so when choosing the direction of its development it is necessary to take into account the historical aspects of community evolution, its cultural and customary features that significantly affect the psychological climate in the community and endogenous relationships;

– organizational and functional - territorial community is a system with horizontal organization of political and social networks, which operates based on democratic principles of development and subject to the participation of its members in solving their livelihood issues with the possibility of self-structuring and creation of internal organizational structures;

– political - the territorial community is a subject of legal relations and a representative of the local community in the political arena;

– economic - the local community is the owner of communal property located on its territory, and its members are payers of tax payments to the local budget. The community operates to provide its members with quality public services, can be a participant in production processes and is a collective consumer.

This emphasizes the priority of considering the territorial community as an economic system that operates to achieve social welfare, political goals and economic growth, provided the effective use of available territorial and spatial resources in the context of ensuring the triad of interests of the local community, territory and individual members.

It should be noted that the problem of management and rational use of available resources and opportunities to ensure economic growth of territorial communities, which in domestic conditions is one of the key targets for the development of the territory, is at the stage of formation and search for optimal solutions. Despite the significant number of scientific approaches and theories aimed at solving local development issues, none of them provides a complete and systematic solution to the problems of local communities and does not take into account current trends and features of their development and condition. This requires understanding a new theoretical approach to the development of territorial communities based on the synthesis and combination of basic guidelines and principles of modern scientific concepts and models of local development.

Popular in recent decades and formed as an independent direction of the theory of economic growth is the model of endogenous growth, aimed at reducing inequality of economic development through the use of internal factors, mechanisms of management and governance. The development of the theory was ensured not only by scientific research and the work of economists, but also by representatives of geography and sociology, which resulted in the diversity of trends within the model (P. Romer's theory of endogenous scientific and technological progress, "schooling model" and "learning by doing"). Lucas, the concept of bottom development by K. Weaver, the decentralization development of B. Planck, the concept of growing development of M. Basand, the theory of rise of W. Rostow, the theory of convergence of J. Lafontaine and P. Idalo, the theory of local development developed by F. Bouvet, Yu. Dion, P.-A. Tremblay, B. Pecur, etc.).

Analysis of numerous approaches and scientific concepts within the theory allows us to identify three key principles that underlie endogenous growth and are common to all areas, namely: 1) territoriality - territory is the basis for endogenous development, which is characterized as integrated because it is carried out in to a limited extent, and which has certain features of autarky; 2) interdependence - the achievement of endogenous growth is the result of the impact and efficiency of use of each element of the limited space within which it is provided (natural, cultural, social, economic, etc.); 3) democracy - endogenous growth is possible only under the conditions of existence and appropriate level of development of democratic institutions in a given area and is based on meeting the basic needs of the population (nutrition, education, health, work, etc.) through the use of local economic potential.

In the context of our study, it is advisable to turn to the analysis of local development concepts that stand out within the theory of economic growth. Given the rather wide range of concepts and models of local development, which relate to finding ways to develop industrial areas, innovation circles, the application of the principles of flexible specialization for economic development of administrative-territorial formations, etc. [5], and differ primarily in emphasizing the superiority of one principle over others [6], define the common ideas on which they are based. Thus, the initial conditions of the process of endogenous economic growth at the local level are the production of innovation, the ability to adapt and the ability to regulate. B. Pecur emphasizes this, noting the key role of the dynamism of the actors in ensuring these conditions [7], as well as M. Bassan, I. Pedrazzini, F. Feinar and R. Peranjake, who note that local development can be interpreted as a partnership agreement on creating favorable conditions for the implementation of local initiatives in the context of community capacity building, adaptation to new conditions, search for new forms and mechanisms of development, which organizational and production methods will be aimed not only at economic benefits but also at solving social, cultural and environmental issues character [8].

Interesting in the context of ensuring economic growth at the local level is the model of rural development developed by DA McGranahan, T. Vojan and D. Lambert in the United States as a synthesis of the theory of endogenous growth and creative economy [9]. The authors of the model identify three main factors of economic growth in rural areas: entrepreneurship, creative class and recreational resources. The basis of the proposed model is the development of entrepreneurship and the involvement of representatives of the creative class through the formation and supply of life in rural areas. At the same time, scientists note that the application of the model is appropriate for the local economy in terms of declining employment in traditional industries and reducing production, which is characterized by the use of low-skilled labor.

Among domestic economists, the issue of endogenous growth has been studied by many scientists. At the same time, analyzing the theory of endogenous growth, we agree with the conclusions of J. Zhalil, who, studying the problem of endogenization of economic development, identified the main areas of economic growth, which are fully consistent with modern conditions of territorial communities in Ukraine:

– investment and innovation policy, in particular the financial tools of their implementation, which set the institutional mechanisms for investment of financial resources;

– business development in the context of increasing the capitalization of economic potential;

– development of human capital in order to increase its productivity increase networking (in particular, as proved by M. Vozhnyak, there is a clear positive relationship between the development of education in a given area and the level of economic growth, and investment in education and health have a positive impact on productivity of the community and activate its members to solve problems of socio-economic nature [10]);

– development of communication environment and development of network relationships;

– decentralization of processes of identification and involvement in economic circulation of available and potential resources of economic development [11].

Determining the directions of achieving economic growth of territorial communities requires taking into account the influence of external conditions, the variability of political and economic conditions and unforeseen factors, the number of which has increased significantly in the context of globalization. In this context, it is appropriate to focus on the study of World Bank experts [12], who emphasize the need to fully support the transformation of local economies during and after the Covid-19 pandemic for long-term economic recovery and sustainability. Ensuring the economic growth of territorial communities in rural areas, they propose to carry out in three directions: 1) search and development of strengths and strengths of a particular area; 2) attracting investment for the development of the local business environment; 3) development of basic infrastructure and provision of Internet access.

At the same time, due to an in-depth analysis of the economic development of local communities in different countries during the Covid crisis, the categories of the population most “affected” by the impact of measures to combat the pandemic were identified. Accordingly, the World Bank recommends that local governments focus on supporting women, youth, the informal sector, and micro and small enterprises on a more sustainable basis. That is, the World Bank emphasizes the need to achieve economic growth while ensuring social justice, which meets the need to implement the Global Sustainable Development Goals for 2015-2030.

The issue of inclusive development is widely represented in the research of foreign scholars, but conceptually and theoretically it has not been developed. According to the UN, inclusiveness is based on the involvement of all marginalized and excluded groups in the development process as stakeholders [13]. The main principles on which the theory is based are: participation - maximum involvement of all community members in the process of its development; accessibility and non-discrimination - ensuring equal access to opportunities for all members of the community.

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It is worth noting that the progress of the theory of inclusive development took place in the context of the development of the state, international relations and the individual. And only in recent years has the theoretical foundations of inclusiveness been directed to the problems of local development. To date, the most complete, in our opinion, definition of inclusive local development has been given by J. Gupta, N. Pove and M. Ross-Tonen: it is a new dimension of development that focuses on the poorest and most marginal members of society, taking into account economic, social and environmental aspects and structural factors that prevent the poorest participants from participating in the development process [14]. In this context, scholars also identify the components of inclusive development at the level of territorial communities: providing equal opportunities for development and equitable distribution of benefits; providing economic opportunities for community members; public participation; environmental protection; adaptive capacity, which provides mitigation of the shocks of existence for different groups within the community [15].

Thus, the inclusion of members of the territorial community in the context of economic growth involves the most effective use of human capital in the direction of enhancing social, labor, managerial and economic relations and the formation of the business environment. At the same time, it is also designed to provide quality living space for all residents of the community. Therefore, we can distinguish two vectors of achieving inclusive development of territorial communities: internal - the maximum involvement of community members in the process of its development; external - ensuring access of members of the territorial community to the opportunities provided by more developed communities.

A component of the theory of inclusive development is the concept of financial inclusion, which substantiates the problem of “banking deserts” - territorial communities whose members do not have access to financial services [16]. Historically, the category of territorial communities – “banking deserts” include poor communities, and lack of access to financial services, despite the factors of slowing economic development, is an additional factor hindering economic growth and, consequently, discrimination against the community [17, 18].

An interesting aspect, which was substantiated in the scientific research of researchers, is to identify the reasons for the inefficiency of the branches of powerful banks in the so-called “banking deserts”. As M. Baradan notes, banks “do not speak the financial language of the poor”, and therefore do not understand that poor consumers “can not be offered banking services as if they were just rich people with less money” [6]. Applying the scientific findings of the psychology of poverty to the theory of financial inclusion reveals differences in the behavior and prerogatives of people in underdeveloped (poorer) communities: poor consumers tend to be more community-oriented than wealthier; they are more concerned with the needs and well-being of their community [17, 19]. This leads to the choice of appropriate mechanisms for banking services to the population of such communities, including the development of utility banks, as consumers of banking services in poorer communities often exaggerate the importance of the utility bank for their community. Accordingly, researchers suggest that banking institutions that “enter” the “banking desert” attract consumers, emphasizing the link between the financial interaction of the consumer with the bank and the well-being of the community.

In general, the basis of the concept of financial inclusion is based on solving the following tasks: 1) determining the role of financial services in an inclusive economy and the development of microfinance models (rural savings and loan associations, self-help groups, credit unions) to ensure financial inclusion of the community; 2) research on the financial behavior of low-income groups to develop more appropriate financial products, especially savings, insurance, payment services, value chain financing and innovative community-based financing models; 3) search for opportunities and ways to establish links with private sector financial institutions, use of mobile banking, etc.; 4) development of approaches to the integration of community-based microfinance models in empowerment strategies for marginalized community members. The main advantages of financial inclusion include: at the level of individuals, financial inclusion results in increased savings, investment in education and resilience to financial shocks; at the community level - reducing financial inequality and economic growth in general [20].

To form a comprehensive approach to economic growth at the level of local communities, in addition to taking into account the principles of endogenous growth and inclusive development, it is necessary to focus on the guidelines of sustainable development, in particular the scientific concept of Nobel Laureate E. Ostrom on rational use of shared resources.

By definition, shared resources are a "natural or artificial resource system" [21], which has the following characteristics: exclusivity (access to a shared resource can be limited at minimal cost), rivalry (competition for access to a shared resource), divisibility (the ability of a resource to be divided into shares) and exhaustiveness. Having conducted numerous empirical studies, E. Ostrom came to a significant conclusion: the management of shared resources by the community that uses them can be characterized by much higher efficiency than when transferring them to private ownership or through public administration; at the same time, methods of managing such resources should differ taking into account territorial, economic, customary differences. Therefore, on the basis of the conducted researches, the author has formed eight principles of effective management of common resources:

1) defining clear boundaries of the common resource;
2) formation of clear rules and norms for the use of common resources based on the needs of the community and the conditions of its development;
3) democratization of the joint resource management process;
4) control over the use of shared resources;
5) formation of a mechanism of graduated sanctions against violators of the rules of using a common resource;
6) formation of a mechanism for effective and rapid resolution of conflicts between users of the resource;
7) formation of an effective effective system of joint resource management, starting from the local level to the regional or state [22].

In the context of defining the concept of "common resources" by E. Ostrom and on the basis of elaboration and supplementation of the classification of common resources of rural communities, carried out by a team of authors led by V. Nelepa [23], we distinguish the main groups of common resources, information and resources of the socio-economic sphere (Fig. 1).

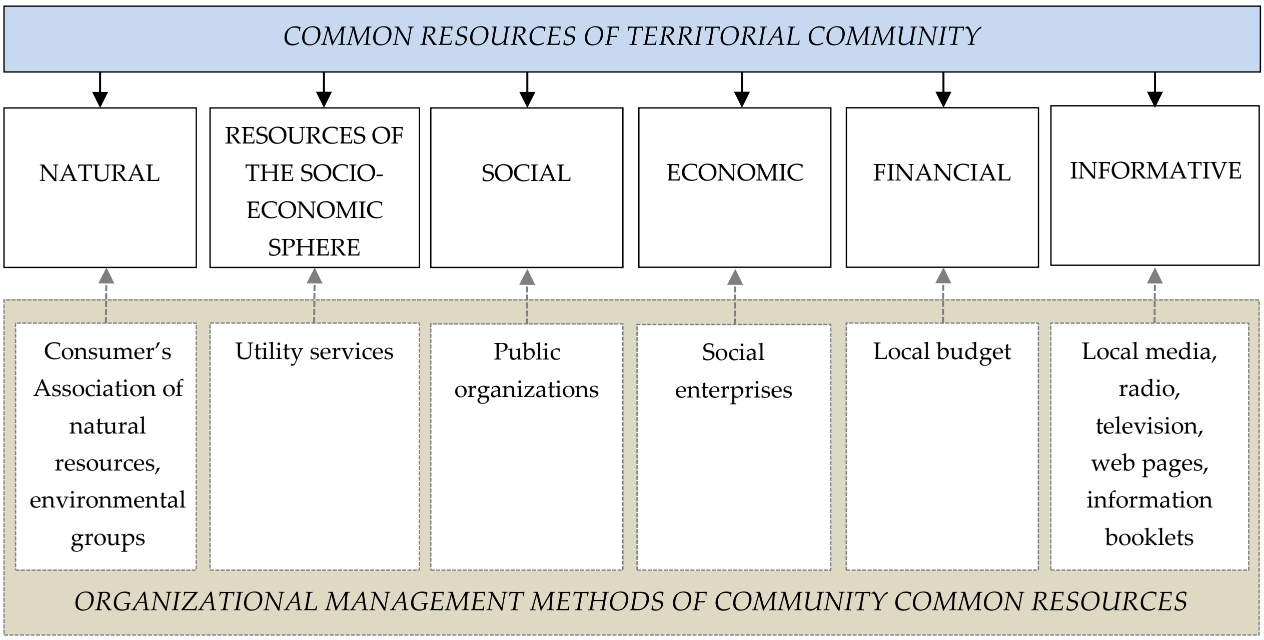

Fig. 1. Types of common resources of territorial community and organizationalmethods of their management. Source: compiled by the authors.

Thereby, the definition in the analysis of scientific theories and concepts of directions and principles of development of territorial communities allows to systematize the factors of their economic growth, which can be conditionally grouped into five groups: natural (including natural resources of the territory); human development factors (including demographic and behavioral (knowledge, skills, motivation, reactions) characteristics of community members); social (taking into account the institutions that promote the development of human capital and determine the areas of management and development of the territory (family, community, enterprises, public organizations, volunteer organizations)); productive (material goods and fixed assets that contribute to the production process); financial.

In this study, the main attention is paid to the group of financial factors of economic growth of territorial communities, and therefore in the process of identifying guidelines for the development of territorial communities in the analysis of economic growth theories, the main attention should be paid to substantiating such factors (Fig. 2).

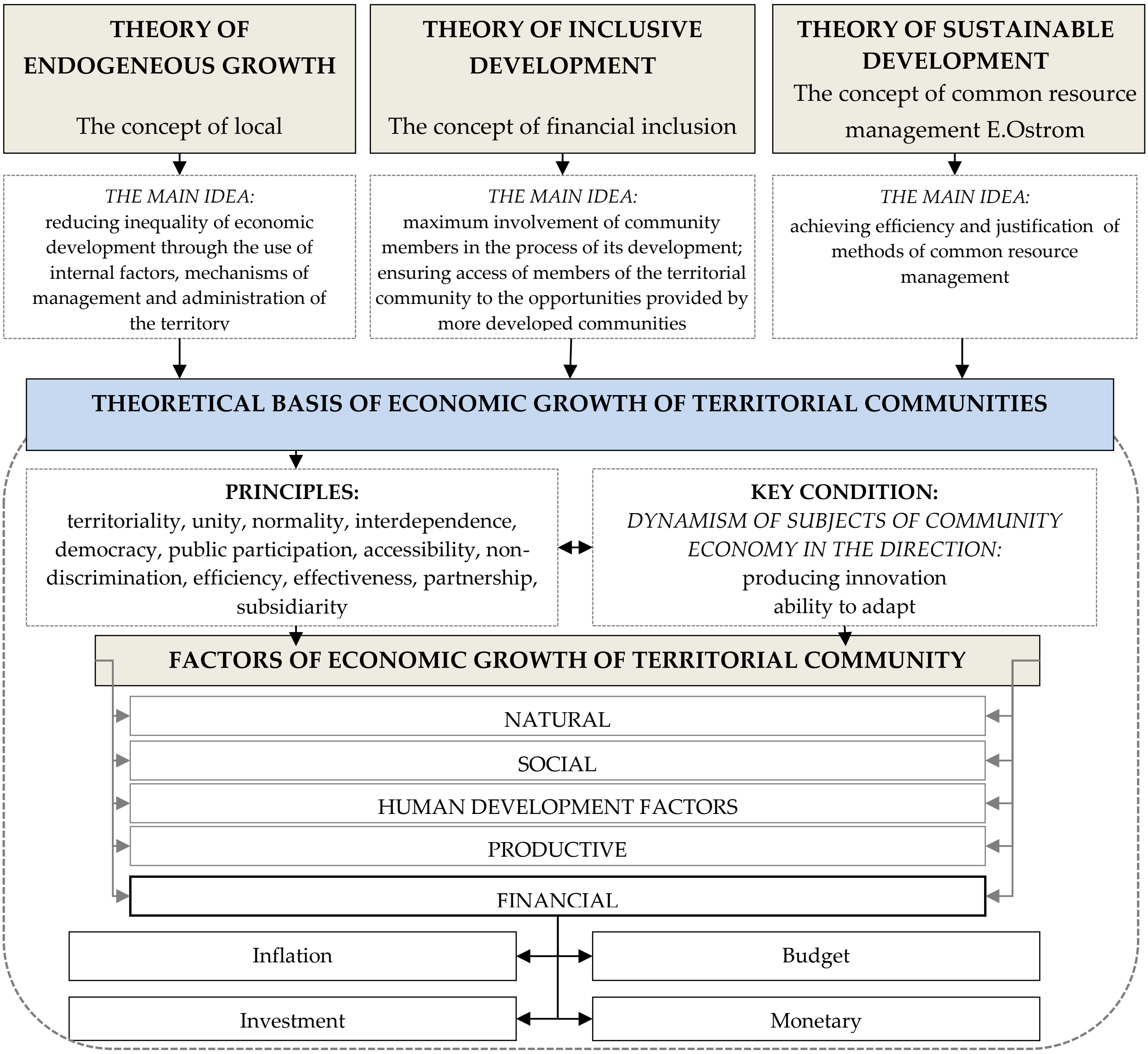

Fig. 2. Selection of financial factors of development of territorial communities in the context of theories of economic growth. Source: compiled by the authors.

The financial factors of economic growth of territorial communities include:

– budget - includes features of formation and use of the local budget;

– investment - involves taking into account the investment policy of the self-government body and identifying the features of the investment direction of the financial resource in community development;

– inflation - a factor influencing changes in the general level of prices and purchasing power of money on the economic development of the territorial community and economic entities in its territory;

– monetary - a factor that allows you to assess access to financial resources, as well as the turnover, distribution and redistribution of money capital between economic entities.

5. CONCLUSIONS

The selection of financial factors of economic growth of territorial communities in the context of the synthesis of the theory of endogenous growth, the theory of inclusive development and the theory of sustainable development contributes to a comprehensive approach to determining the ways of development of territorial communities. After all, the study of financial factors of territorial communities in the context of the analyzed theories will be carried out from different angles: in the theory of endogenous growth - from the standpoint of stimulating economic development and overcoming economic and social inequality, in the theory of inclusive development - from the standpoint of community involvement , which are in the risk group, in the concept of joint resource management the finances of the territorial community are considered as one of the common resources of the community, which requires finding an effective approach to its management.

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REFERENCES

[1] Venger V.V. Evolution of views on the theory of economic growth. *Economy and Society*, **2** (2016), 3–9. (in Ukrainian)

[2] Chen Derek H.C., Kee H.L. A Model on Knowledge and Endogenous Growth. *World Bank Policy Research Working Paper*, **20433** (2004). The World Bank, Washington D.C. Available at: https://openknowledge.worldbank.org/handle/10986/8878

[3] *World development report 2000/2001: Attacking poverty*. World Bank, Oxford University Press, New York, USA, 2000. Available at: https://openknowledge.worldbank.org/handle/10986/11856

[4] Birochi R., Pozzebon M. Improving financial inclusion: towards a critical financial education. Framework. *Rev. adm. empres*, **56** (3) (2016). doi: 10.1590/S0034-759020160302

[5] Ryeznikova N.V., Ivashchenko O.A. The problem of economic development and growth in the context of overcoming global asymmetries. *Odesa National University herald*, **21** (1) (2016), 55–59. Available at: http://nbuv.gov.ua/UJRN/Vonu_econ_2016_21_1_14 (in Ukrainian)

[6] Bouvet F. *Recherche sur les fondements méthodologiques des politiques économiques environnementales confrontées à la notion de développement soutenable*. Université Panthéon-Sorbonne, Paris, 2001. (in French)

[7] Pecqueur B. Le developpement local: mode ou modele? In: *Alternatives économiques. Série Poche*. Syros/Alternatives, Paris, 1989. (in French)

[8] Bassand M., Hainard F., Pedrazzini Y., Perrinjaquet R. *Innovation et changement social: actions culturelles pour un développement local*. Presses Polytechniques Romandes, Lausanne, 1986. (in French)

[9] McGranahan D., Wojan T., Lambert D. The rural growth trifecta: outdoor amenities, creative class and entrepreneurial context. *Journal of Economic Geography*, **11** (3) (2011), 529-557.

[10] Vozhnyak M.H. New approaches to the analysis of the mutual influence of social inequality, human capital and economic growth. *International economic policy*, **1–2** (16–17) (2012), 35–54. Available at: http://nbuv.gov.ua/UJRN/Mep_2012_1-2_4 (in Ukrainian)

[11] Zhalilo Ya. A. On the institutional basis of endogenization of economic development. Paradigmatic shifts in the economic theory of the XXI century: materials of the III International scientific-practical conference. Kyiv, November 2-3, 2017. KNEU, 2017, 763. (in Ukrainian)

[12] Sharma S. World Bank says 'local economic development' is need of hour; lists out these 3 focus areas. *Financial Express,* (2020). Available at: https://www.financialexpress.com/economy/world-bank-says-local-economic-development-is-need-of-hour-lists-out-these-3-focus-areas-rural-livelihood-recovery/2090879/

[13] *Disability and Development. Inclusive development. Handicap international*. AFC. Available at: http://www.hiproweb.org/fileadmin/cdroms/Handicap_Developpement/www/en_page61.html

[14] Gupta J., Pouw N., Ros-Tonen M. Towards an Elaborated Theory of Inclusive Development. *European Journal of Development Research*, **27** (4) (2015), 541–559. doi: 10.1057/ejdr.2015.30

[15] Bos K., Gupta J. Inclusive development, oil extraction and climate change: a multilevel analysis of Kenya. *International Journal of Sustainable Development & World Ecology*, **23** (6) (2016), 482–492. doi: 10.1080/13504509.2016.1162217

[16] Mende M., Salisbury L.C., Nenkov G., Scott M. Improving Financial Inclusion through Communal Financial Orientation: How Financial Service Providers Can Better Engage Consumers in Banking Deserts. *Journal of Consumer Psychology*, **30** (2) (2020), 379–391.doi: 10.1002/jcpy.1103

[17] Baradaran M. How the poor got cut out of banking. *Emory Law Journal,* **62** (3) (2013), 483–548. Available at: https://scholarlycommons.law.emory.edu/elj/vol62/iss3/1

[18] Morgan D., Pinkovskiy M., Yang B. *Banking deserts, branch closings, and soft information*. Liberty Street Economics. Federal Reserve Bank of New York, 2016 Available at: https://libertystreeteconomics.newyorkfed.org/2016/03/banking-deserts-branch-closings-and-soft-information.html

[19] Piff P.K., Stancato D.M., Martinez A.G., Kraus M.W., Keltner D. Class, chaos, and the construction of community. *Journal of Personality and Social Psychology*, **103** (6) (2012), 949–962. doi: 10.1037/a0029673

[20] Demirguc-Kunt A., Klapper L., Singer D., Ansar S., Hess J. *Global Findex Database 2017: Measuring financial inclusion and the fintech revolution.* DC: World Bank, Washington, 2018. doi: 10.1596/978-1-4648-1259-0

[21] Ostrom E. *Joint management. Evolution of institutions of collective action*. Nash chas, Kyiv, 2012. (in Ukrainian)

[22] Liberto D. Elinor Ostrom. *Investopedia*. Available at: https://www.investopedia.com/terms/e/elinor-ostrom.asp

[23] Nelep V., Fursenko M., Vysots'ka O., Fursenko I. Management of common resources in rural areas: in the field of Nobel Laureate' research. *Ekonomika APK*, **10** (2014) 92–98. Available at: http://eapk.org.ua/en/contents/2014/10/92 (in Ukrainian)

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Возняк Галина, Патицька Христина, Кльоба Тарас. Детермінація фінансових чинників у новітніх теоріях економічного зростання територіальних громад. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 49–59.

В сучасних умовах забезпечення економічного зростання територіальних громад потребує теоретичного переосмислення та додаткового дослідження, позаяк нові виклики негативно позначились на добробуті населення та подальшому поступі.

Метою статті є детермінація фінансових чинників у новітніх теоріях економічного зростання територіальних громад.

Узагальнено наукові підходи до визначення поняття "територіальна громада" запропоновано власний підхід та обґрунтовано основні ознаки територіальної громади (територіальна, природна, соціально-психологічна, історично-культурна, організаційно-функціональна, політична, економічна). Акцентовано на потребі нового теоретичного підходу до розвитку територіальних громад на основі синтезу і поєднання засадничих орієнтирів і принципів сучасних наукових концепцій і моделей, їх трактування в контексті місцевого розвитку. Досліджено новітні теорії економічного зростання, серед яких: теорія ендогенного зростання, інклюзивного розвитку та теорія сталого розвитку (виділено концепцію Е. Остром про управління спільними ресурсами громади). Обґрунтовано, що модель ендогенного зростання орієнтована на скорочення нерівності економічного розвитку через використання внутрішніх чинників, механізмів господарювання і управління територією. Виділено два вектори досягнення інклюзивного розвитку територіальних громад: внутрішній – максимальне залучення членів громади до процесу її розвитку; зовнішній – забезпечення доступу членів територіальної громади до можливостей, якими забезпечені більш розвинені громади. Акцентовано, що ключовою думкою у дослідженнях Е. Остром є досягнення ефективності та обґрунтування способів управління громадою спільними ресурсами. В межах теорії інклюзивного розвитку проведено огляд концепції фінансової інклюзії, якою порушується проблема розвитку громад – "банківських пустель". Вказано на існуванні взаємозалежності сприйняття членами територіальних громад – "банківських пустель" можливостей та перспектив отримання банківських послуг, що вимагає залучення теоретичних основ поведінкової економіки до вивчення цього питання. Систематизовано чинники економічного зростання територіальних громад, які об'єднано у п'ять груп: природні, чинники людського розвитку; соціальні, виробничі та фінансові. До фінансових чинників економічного зростання територіальних громад віднесено: бюджетний; інвестиційний; інфляційний; грошово-кредитний. Обґрунтовано доцільність застосування ідей новітніх теорій економічного зростання у процесі аналізу фінансових факторів.

Ключові слова: територіальна громада, фінансові чинники економічного зростання, ендогенне зростання, інклюзивний розвиток, сталий розвиток, спільні ресурси, фінансова інклюзія.

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DISPUTED ASPECTS OF THE REPUTATION MANAGEMENT IMPLEMENTATION

VITALIY SHKROMYDA

Abstract. The recognition of the company and its products, its positive perception among stakeholders are important drivers of sustainable development, which together generate constant sales, provide high margins and strengthen competitive positions in the relevant market. The key factor in this success is the company's impeccable corporate reputation, the importance and role of which is more and more attested by the researchers in their publications, both on the theoretical and practical levels.

Reputation management as a separate component of the company's governance system is accompanied by debatable issues regarding its separation and independence. The sources on this subject trace differing views among scholars and practitioners to be agreed. Some researchers attribute reputation management to the "public relations" and "corporate relations" competencies and, while others single out and prove its independence as a separate management system, which has its own purpose and specific tasks.

The study proved that reputation management is an independent component of the company's governance system. The substantiation of such a statement is revealed by the essential content of corporate reputation, is accompanied by the clearly outlined goal and performed functions, as well as the justification of the importance of reputation management in the company's activities and its strategic development. We agree that reputation management is deeply integrated with other components of the governance system, such as "public relations", "corporate communications" and "corporate relations", as a result of which they are often equated. However, these components of the governance system differ from each other both in content and purpose. It is established that the highest goal of reputation management is to build a corporate reputation and achieve the key stakeholders' loyalty.

The scientific value of the research is to supplement the theoretical and methodological basis of reputation management, in particular in terms of addressing the disputed aspects of its implementation in the companies' activities.

Keywords: corporate reputation, reputation management, public relations, discussion.

JEL Classification: D91, M14, M21, M31.

1. INTRODUCTION

Ensuring successful operations in today's competitive environment urges companies to significantly reconsider traditional management approaches. The existing trends, accompanied by permanent variability and uncertainty, directly or indirectly affect management methods, which as needed are forced to improve and adjust to existing changes.

Recently, there has been a growing interest of business representatives in their reputation and its impact on the current activities of the company. Realizing the importance and value of the latter, the governing bodies of most business structures are trying to build an impeccable reputation, strengthen their presence and use it effectively. Of course, the process of forming the competitive advantages, including reputation, requires a set of knowledge and competencies that help identify the object of study, describe the classification features and inherent properties, identify structural elements, as well as properly select methodological approaches to developing and making effective management decisions. In this context, the introduction of reputation management in the activities of companies and the formation of its theoretical and methodological foundations are relevant and requires further research.

Along with this, reputation management as a separate component of the company's governance system is accompanied by debatable issues regarding its separation and independence. Thus, in specialized sources, we can find different opinions of scholars and practitioners, where reputation management is either attributed to the competencies of the traditional field of "public relations / corporate communications", or identified as and proved to be an independent separate management system, which has its own purpose and specific objectives. We believe that the implementation of reputation management in order to construct the company's impeccable reputation makes it necessary to consider and resolve controversial aspects at both the theoretical and practical levels.

2. THEORETICAL BACKGROUND

Addressing the issues of building the companies' impeccable reputation as one of the key drivers of their sustainable development is caused by the permanent manifestations of the crisis phenomena in the economy and their impact on the activities of business entities. A number of foreign scholars, namely G. Dowling, C. Fombrun, C. Genasi, M. Goldberg, B. Lafferty, G. Marken, P. Nakra, K. Wiedmann, in their works pay special attention to the problems of constructing corporate reputation and developing reputation management. Domestic researchers L. Batchenko, N.E. Deeva, O. Dubrova, L. Gonchar, O. Rodionov and others are also actively involved in solving the above mentioned problems. Statements proving the opposite ideas and treating corporate reputation as the part of "public relations" and "corporate communications" can be traced in the publications by S. Ewen, D. Finn, J. Grunig, J. Hutton, M. Kent, D. Lattimore, D. Newsom, K. Sriramesh.

3. RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The purpose of the study is to address the issue of the inconsistency of the researchers' views on singling out reputation management and prove its independence as a separate management system. The achievement of the outlined goal is possible by revealing the essential content of corporate reputation and substantiating its importance in the company's activities and achieving the set strategic goals.

The research is based on the use of general scientific methods and techniques, such as the method of generalization and systematization – in analyzing scientific papers on the subject, the study of the essence and importance of corporate reputation, theoretical foundations of reputation management; as well as of the abstract-logical method and the method of descriptive reflection – in the construction of the illustration material and the formation of the author's statements and conclusions.

4. RESULTS AND DISCUSSION

Reputation management, like any management process, involves a focus on achieving goals. We believe that the priori strategic goal of such management is to form and maintain the trust and loyalty of key stakeholders of the company. In other words, the highest degree of the impeccable reputation of the company is a stable commitment and unconditional loyalty of its contact groups.

The best foreign practices show that theorists and practitioners justify in their researches the need for reputation management and prove the importance and impact of the latter on the company's activities. G. Stigler, for instance, mentions that in the conditions of the company's impeccable corporate reputation there is an opportunity to reduce the cost of production per unit of output, which has a positive effect on performance [1]. In this case, it should be noted that the researcher does not mention how and in what chain sequence the mentioned effect is achieved.

In turn, the scientific publications by G. Dowling [2], S. Caminiti [3], S. Preece [4], C. Eidson [5] and P. Nakra [6] testify to the significant influence of the company's positive reputation in the struggle for qualified personnel, promoting the employment of highly productive employees. Here it is worth agreeing with the opinion of the researchers, since such a statement is especially relevant in a period of labor shortages of various qualifications and a sharp struggle for them.

M. Goldberg [7], C. Fombrun [8] and B. Lafferty [9] note that the company's strong reputation has a positive effect on consumers, increases their confidence in products and encourages regular purchases. This approach ensures that companies retain regular customers, as noted by S. Caminiti [3] and S. Preece [4], and, according to B. Klein [10] and P. Milgrom [11], allows you to get a price premium in the form of additional markups. Under such conditions, according to P. Roberts and G. Dowling [12], a good corporate reputation over time allows the company to increase profitability and make windfall-profits.

It is known that the company's reputation appears at the same time with its creation and is accompanied throughout all cycles of its activity. This presence of the company's intangible assets forces its governing bodies from the first days of operation to weigh their own behavior and, of course, the behavior of other market participants and coordinate their actions with the target groups from the standpoint of reputational risks and threats [13].

A key element of this relationship is information that, on the one hand, expresses the contact groups' expectations and, on the other hand, reflects the company's desire to meet existing expectations. Delivering the necessary information about the required content to certain users requires some effort and costs. For example, a company, engaging in philanthropy and other socially significant activities in order to build its reputation, is forced to spend resources on publicizing and disseminating these actions among stakeholders by contributing to the media, being mentioned in blogs, posting on social media, etc. In other words, the implementation of charitable and social activities and their inclusion in the company's reputational assets requires additional costs and efforts. On the contrary, the governing bodies caring about the reputation of their own company, making a mistake related to their activity, is forced to respond immediately and make significant efforts (spend costs) to refute the information, which usually spreads quickly in the light of negative events and, often, scandalous sensations.

In summary, we can conclude that the company's good and impeccable reputation is a precious good, the value of which is expressed in the cost and time dimensions. After all, the company's significant expenditure of appropriate resources and time is required both at the stage of the formation and building of its own positive reputation, and at the stage of its maintenance and preservation. We believe that in this context, the determining and effective factor is the communication between the company and the stakeholders, which provide the exchange of necessary information and whose capacity determines the number of resources and time required to build and maintain the company's reputation.

The word "communication" comes from the Latin "communico", which means a message, connection, communication and in a broad sense – a term that describes human interaction in the world. The modern philosophical interpretation treats it primarily as a sign of constructive interaction of individuals, social groups, nations and ethnic groups, which develops on the basis of tolerance and understanding [14]. It can be stated that reputation is formed in the process of communication through the perception and evaluation of information about the company's activities by various contact groups.

Under such conditions, well-established communication is a means of both the formation of reputation and the implementation of reputation management.

A historical review of scientific publications shows that the researchers used to have a certain inconsistency of their views on singling out reputation management as a separate component of the company's governance system. This position of some researchers [15, 16, 17, 18] is explained by the fact that the company's "reputation management" is part of "corporate relations" and "corporate communication", i.e. it lies within the competence of the traditional industry "social relations" or "public relations". The evidence of this, in their opinion, is the companies' widespread practice of creating relevant departments, divisions or individual public relations (PR) positions, while the creation of reputation management positions is not practiced.

In this regard, J. Hutton noted that "… the growth of "reputation management", "perception management" and "image management" is a dangerous trend for the industry because they came for the wrong reasons. Most managers who have poor public relations skills think superficially without understanding the differences between "image" and "perception", and follow advice of advertising agencies, which benefit from using these terms to diversify their activities [19].

D. Finn [20], S. Ewen [21] and D. Newsom [22] shared the same view, noting that "image" and "reputation" are not directly manageable because they are the result of strategic and, at the same time, daily behavior of the company. According to them, reputation management can be compared to trying to manage one's own popularity.

At the same time, there are opposing views of other researchers and practitioners who jointly argue for a separate self-sufficient branch of management – reputation management, which is outlined and separated from the traditional field of "public relations" by setting its own goals and solving its own range of tasks.

The well-known investor and philanthropist Warren Buffett is a proponent of the need to build and maintain the company's corporate reputation, arguing that "the loss of reputation is a much greater disaster for the company than the loss of funds" [23]. He also adds that "It takes 20 years to build a reputation and five minutes to ruin it. If you think about that, you'll do things differently". Thus, W. Buffett emphasizes the separation of a particular area of management and the importance of managing the company's reputation.

G. Marken believes that the company's reputation is built and managed through small day-to-day activities. At the same time, he notes that reputation is built by answering every phone call, every e-mail, as well as by every product release, every decision made and every action taken [24]. That is, the researcher emphasizes that the creation and management of the company's reputation is a long-term and daily phenomenon in the course of each business transaction. This approach is shared by C. Genasi who warns that "the quality of communication must be maintained by the quality of action" [25]. His position is that reputation management should be seen as a process that is constantly close to the day-to-day running of the business. An important rule should be compliance with the company's behavior in the market, the published plans and stated intentions.

The growing need for reputation management is noted in their empirical studies by K. Wiedmann and H. Buxel on the example of the German companies [26]. The researchers also note that the scale of implementation of reputation management is directly proportional to the level of competition in the relevant market, where these companies are positioned.

In addition to the theoretical substantiation and generalizations, the importance of reputation management among professionals and the need for its implementation in practice is quite convincingly discussed. In this context, we should mention the thematic international conference held in 2009 by the authoritative association of insurers The Geneva Association, which was devoted to the issues of reputation and reputation risk management [27]. In their report, R. Eccles and M. Vollbracht focused on reputation management and recommended that companies strengthen corporate communications to inform stakeholders and thus manage reputational risks. They suggest focusing on disseminating messages that meet the expectations of the interested counterparties. At the time, Swiss Re P. Forstmoser and N. Herger, advocated a "triple line" of reputation management aimed at strengthening the control over the relations between stakeholders and mass media. Based on the experience of Swiss Re, they propose the implementation of reputation management through corporate citizenship, sustainability management, corporate compliance and social significance.

Thus, "public relations / corporate communications" can be embodied in a process where "reputation" is one of the effective indicators of such a process or a tool of reputation management.

A review of the Ukrainian researchers' publications on reputation management and prospects for its implementation suggests a relatively new direction of domestic research. The first articles on corporate reputation began to appear in the early 2000s. Among the first researchers was O. Rodionov, who published his own paper on this subject and pointed out that "… reputation management is a permanent comprehensive process of forming and maintaining a positive public perception of the company and its products, creating a commercial and financial result and long-term credit of trust to the interested contact audiences and society in general" [28].

O. Dubrova offers her own approach to reputation management, which aims at forming and strengthening reputation [29]. In general, this position is correct because it expresses the purpose of such management. In their own research, L. Batchenko and L. Honchar note that "… reputation management is a complex business process of the higher governance, the complex and multifaceted one, requiring a systematic approach, strategic vision and understanding of the direction vector, the ability to select the optimal set of communication tools, etc." [30]. At the same time, as the researchers state, reputation management is a long-term strategy that involves the creation, control and maintenance of the necessary image of the company, and prevents reputation from spontaneous forming.

N. Dyeyeva and V. Grabchak's prove the need of implementing reputation management, which involves "… the process of planning, organizing, implementing and monitoring the company's reputation in order to achieve a positive reputation and minimize reputational risks". At the same time, the researchers note that the effective reputation management involves its implementation on an ongoing basis, i.e. "… the company's purposeful and organized acquiring holistic, stable traits and qualities necessary for its successful operation, taking into account the impact of the environmental factors" [31].

As we can see, the mentioned theoretical and practical tendencies in the foreign and domestic scientific dimension argue the need to single out a separate area of management, namely – reputation management, which, we believe, has its purpose, tasks, functions, tools, etc. We agree that it is impossible to directly manage the company's corporate reputation, because it is unreal to manage a set of opinions, impressions and expectations of individuals or groups of people [22, 20, 21]. However, we understand that the factors of such a public opinion, emotional perception or rational judgment are the results and consequences of the company's close relations with contact groups, the level and quality of which depend on the management decisions, and therefore are relevant and manageable in accordance with the commercial goals and objectives. For such reasons, it can be argued that it is more correct to use the phrase "management of factors (drivers) of the company's corporate reputation".

It is established that in the economic scientific sources we may often encounter the concepts of "reputation governance" and "reputation management", which are often misused by the authors of various publications. We believe that this approach to "reputation" is correct, although the etymological meaning of the process of "governing" in general is broader and "covers objects of both living and non-living origin" [32]. Management, in turn, is part of a system where the objects of management are business relationships and organizational structures [33].

Given the above, we propose an author's definition of "reputation management", which should be understood as a separate segment of the company's governance system, which is based on the interdisciplinary approach and with the use of information and communication resources allows you to build and maintain the expected corporate reputation.

The visualization of such a statement is presented in Fig. 1.

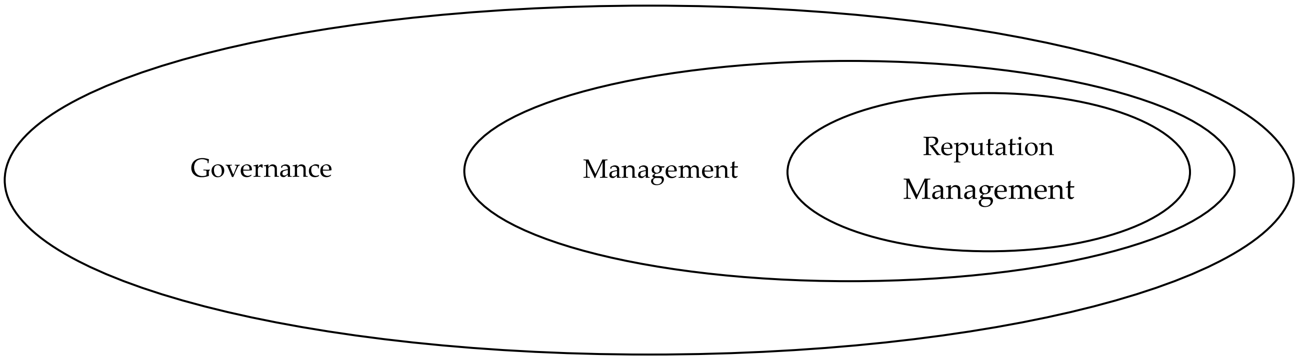

Fig. 1. The place of reputation management in the coordinate system of the process of the company' governance. Source: developed by the author.

In summary, it should be noted that reputation management is an independent component of the governance system, which has its own purpose and objectives, is characterized by specific features that distinguish it from other components, and plays a key role in achieving the company's strategic goals. In this context, the prerequisites for the introduction and application of reputation management in the modern realities of the business environment are:

– oversaturation of markets and permanent growth of competition for consumers;

– free access to any information through the Internet environment and openness to the outside world;

– public demand for transparency of economic activity and involvement of companies in the joint solution of environmental and other social issues.

5. CONCLUSIONS

1. The introduction of reputation management in the course of the company's activities should be accompanied by obtaining the expected results from the implementation of such measures. It is determined that the implementation of management decisions in a given direction provides usefulness and a number of benefits that ultimately contribute to the development of the company's impeccable corporate reputation among stakeholders.

2. It is proved that reputation management is an important component of the company's governance system. Its independence is expressed by the specifics of the essential content of the corporate reputation, accompanied with a clear goal and objectives, as well as the justification of the importance of reputation management in the company's activities and its strategic development.

3. Reputation management is closely related to and deeply integrated with other types (components) of management, such as "public relations", "corporate communications" and "corporate relations", as a result of which they are often equated. However, these components of governance differ from each other on the basis of the purpose of their implementation and the functions they perform. It is established that the highest goal of reputation management is to build a corporate reputation and achieve the key stakeholders' loyalty.

4. The prospect of further research is to develop a theoretical and methodological basis for the information support of the reputation management system, which will provide for the effective use of accounting and analytical tools to build and develop the company's impeccable reputation in the market.

REFERENCES

[1] Stigler G.J. Information in the Labor Market. *Journal of Political Economy*, **69** (1962), 49–73.
[2] Dowling G.R. Managing Your Corporate Images. *Industrial Marketing Management*, **15** (1986), 109–115.
[3] Caminiti S. The Payoff from a Good Reputation. *Fortune*, **125** (3) (1992), 49–53.
[4] Preece S.B., Fleisher C. and Toccacelli J. Building a Reputation Along the Value Chain at Levi Strauss. *Long Range Planning*, **28** (6) (1995), 88–98.
[5] Eidson C. and Master M. Top Ten … Most Admired … Most Respected: Who Makes the Call? *Across the Board*, **37** (2000), 16–22.
[6] Nakra P. Corporate Reputation Management: "CRM" with a Strategic Twist. *Public Relations Quarterly*, **45** (2) (2000), 35–42.
[7] Goldberg M.E. and Hartwick J. The Effects of Advertiser Reputation and Extremity of Advertising Claim on Advertising Effectiveness. *Journal of Consumer Research*, **17** (2) (1990), 172–179. doi: 10.1086/208547
[8] Fombrun C.J. and van Riel C. The Reputational Landscape. *Corporate Reputation Review*, **1** (1-2) (1998), 5–14.
[9] Lafferty B.A. and Goldsmith R.E. Corporate Credibility's Role in Consumers' Attitudes and Purchase Intentions When a High versus a Low Credibility Endorser is Used in the Ad. *Journal of Business Research*, **44** (2) (1999), 109–116. doi: 10.1016/S0148-2963(98)00002-2
[10] Klein B. and Leffler K.B. The Role of Market Forces in Assuring Contractual Performance. *Journal of Political Economy*, **89** (1981), 615–641. Available at: http://oz.stern.nyu.edu/cite05/readings/cabral2.pdf
[11] Milgrom P. and Roberts J. Predation, Reputation and Entry Deterrence. *Journal of Economic Theory*, **27** (1982), 280–312. doi: 10.1016/0022-0531(82)90031-X
[12] Roberts P.W. and Dowling G.R. The Value of a Firm's Corporate Reputation: How Reputation Helps Attain and Sustain Superior Profitability? *Corporate Reputation Review*, **1** (1) (1997), 72–76.
[13] Shkromyda V.V. and Shkromyda N.Ya. Features of the study of the company's reputation. *Scientific economic journal "Intellect XXI"*, **3** (2019), 110−116. Available at: http://www.intellect21.nuft.org.ua/journal/2019/2019_3/3_2019.pdf (in Ukrainian)
[14] Khamitov, N. *Philosophical encyclopedic dictionary*. Abris, Kyiv, 2002. ISBN 966-531-128-X (in Ukrainian)
[15] Sriramesh K. and Vercic D. *The global public relations handbook: Theory, research, and practice*. Routledge, 2003.
[16] Kent M.L. and Taylor M. Toward a dialogic theory of public relations. *Public relations review*, **28** (1) (2002), 21−37. doi: 10.1016/S0363-8111(02)00108-X
[17] Grunig J.E. *Excellence in public relations and communication management*. Routledge, 2013.
[18] Lattimore D. and Lattimore D. *Public relations: The profession and the practice*. McGraw-Hill, New York, 2004.
[19] Hutton J.G. The definition, dimensions and domain of public relations. *Public Relations Review,* **25** (2) (1999), 199–214. Available at: https://m92mc.files.wordpress.com/2015/01/hutton-1999-public_relations_review.pdf
[20] Finn D.W., Baker J., Marshall G.W. and Anderson R. Total quality management and internal customers: measuring internal service quality. *Journal of Marketing Theory and Practice*, **4** (3) (1996), 36–51. doi: 10.1080/10696679.1996.11501731
[21] Ewen S. *PR!: a social history of spin*. Basic Books, New York, 1996.
[22] Newsom D., Turk J., and Kruckeberg D. *Cengage Advantage Books: This is PR: The Realities of Public Relations*. Cengage Learning, 2012.
[23] Buffett W. and Cunningham L.A. *The essays of Warren Buffett: lessons for corporate America*. L. Cunningham, 2001.
[24] Marken G.A. Reputation management starts at home: One day at a time. *Public Relations Quarterly*, **49** (2) (2004), 35–36.
[25] Genasi C. *Winning reputations: how to be your own spin doctor*. Springer, 2001.
[26] Wiedmann K. and Buxel H. Corporate Reputation Management in Germany: Results of an Empirical Study. *Corporate Reputation Review*, **8** (2005), 145–163. doi: 10.1057/palgrave.crr.1540246

[27] Schanz K.U. Maintaining stakeholder trust in difficult times: Some fundamental reflections in light of the credit crisis. *The Geneva Papers on Risk and Insurance-Issues and Practice*, **34** (2) (2009), 260–270.
[28] Rodionov O.V. Approaches to defining the essence of the concept of "business reputation of the enterprise". *Project Management and Production Development*, **4** (16) (2005), 133–140. (in Ukrainian)
[29] Dubrova O.S. Business reputation of the enterprise: practical aspects of management. *Economy and State*, **12** (2009), 38–41. (in Ukrainian)
[30] Batchenko L. and Gonchar L. Reputational capital as a basis for economic growth of enterprises in the hotel and restaurant business. *Restaurant and hotel consulting. Innovations*, **2** (2018), 64–80. (in Ukrainian)
[31] Deeva N.E. and Grabchak V.I. Enterprise reputation management: the main factors influencing the formation and improvement. *Young Scientist*, **5** (32) (2016), 48–52. (in Ukrainian)
[32] Okorsky V.P. *Fundamentals of management*. Rivne, 2009. (in Ukrainian)
[33] Drucker P.F. *Management cases*. Harper Collins, 2019.

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Шкромида Віталій. Дискусійні аспекти впровадження репутаційного менеджменту. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 60–67.

Визнання компанії, пізнаваність її продукції та позитивне сприйняття серед стейкхолдерів виступають вагомими драйверами сталого розвитку, які в сукупності породжують постійні продажі, забезпечують високу маржу та підсилюють конкурентні позиції на відповідному ринку. Ключовим чинником такого успіху є бездоганна корпоративна репутація компанії, значимість і роль якої все більше дослідників засвідчують у своїх публікаціях як на теоретичному, так і на практичному рівнях.

Визначено, репутаційний менеджмент як окремий компонент системи менеджменту компанії супроводжується дискусійними питаннями щодо його виокремлення та самостійності. У літературних джерелах з цього приводу простежуються різні думки серед науковців та практикуючих фахівців, які потребують узгодження. Одні дослідники відносять репутаційний менеджмент до компетенцій "зв'язки з громадськістю" та, водночас, інші − виокремлюють та доводять його самостійність як окремої системи менеджменту, яка має свою мету та конкретні завдання.

У ході дослідження доведено, репутаційний менеджмент є самостійним компонентом системи менеджменту компанії. Обґрунтування такого твердження виражається сутнісним наповненням корпоративної репутації, супроводжується чітко поставленою метою і функціями, які виконуються, а також обґрунтуванням важливості репутаційного менеджменту у діяльності компанії та її стратегічному розвитку. Погоджуємося, репутаційний менеджмент глибоко інтегрований з іншими компонентами системи менеджменту, такими як "зв'язки з громадськістю", "корпоративні комунікації" та "корпоративні відносини", внаслідок чого їх часто ототожнюють. Проте, означені компоненти системи менеджменту вирізняються один від одного як за змістом, так і за призначенням. Встановлено, найвищою метою репутаційного менеджменту є конструювання корпоративної репутації та досягнення лояльності ключових стейкхолдерів.

Науковою цінністю проведених досліджень є доповнення теоретико-методологічної основи репутаційного менеджменту, зокрема в частині вирішення дискусійних аспектів його впровадження у діяльність компаній.

Ключові слова: сільськогосподарські підприємства, трансформація, інтеграція, механізм, моніторинг.

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FINANCIAL BEHAVIOR OF UNITED TERRITORIAL COMMUNITIES IN THE CONDITIONS OF DECENTRALIZATION REFORM IN UKRAINE

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Abstract. The article deals with the study of amalgamated territorial communities functioning peculiarities during the decentralization in Ukraine. It contains substantiation of the territorial community's financial behavior as a basis for efficient administrative and financial decisions, as well as a study of the character and model of this behavior. The research of the models and peculiarities of amalgamated territorial communities' financial behavior allows assessment and forecast of their social and economic development vectors; establishing the grounds for subsidies and opportunities for the increase of financial solvency regarding the formation of their expenses and performance of functions and assignments, laid upon them. The results of the research have emphasized the need for further scientific studies of behavioral aspects of the amalgamated territorial communities' financial resources forming, as well as substantiation of their financial decisions for the attraction of additional proceeds. Active implementation of decentralization reform in Ukraine has started only in 2014 with creation of amalgamated territorial communities. The authors have researched the essence of the amalgamated territorial community's financial behavior, being the basis for the establishment of its financial solvency, sustainability, as well as social and economic development. The study found that the main factor influencing the financial behavior of amalgamated territorial communities in Ukraine in terms of the priority of their budget expenditures and investment activities is the size of the community (characterized by area and population). The authors also proved that the key motives for the financial behavior of amalgamated territorial communities in matters of priority of budget expenditures and investment activities are the following: increasing their own revenues and increasing the financial independence of local governments. This actualizes the search for their own ways to strengthen financial capacity and prepare attractive offers to investors and increase the number of jobs, as well as further unification of small local communities.

Keywords: budget decentralization, amalgamated territorial community, financial behavior of amalgamated territorial community, own income, subsidy level.

JEL Classification: H 72, R 51.

1. INTRODUCTION

In the current context of the reform of local self-governance in Ukraine, the issue of decentralization becomes particularly relevant, since it is one of the basic conditions for the independence and effective functioning of local self-government bodies.

Given that the vast majority of village, town and city budgets of cities of rayon significance were deeply subsidized, depriving territorial communities of the opportunity to carry out the necessary expenditures for socio-economic development, the task was to combine such administrative and territorial units into united territorial communities. It is important, however, to achieve the financial capacity of the community, which consists in the ability to independently, through the relevant local authorities, at the expense of their own resources, to resolve issues of local importance in the interests of the inhabitants, providing the appropriate level of education, culture, health care, social protection, housing and communal services, etc.

The accumulation and use of the own financial resources of the united territorial communities involve the attraction of funds from different sources and their distribution in directions according to needs. The multivariateness of the relevant decisions and the work on their implementation forms the financial behavior of the community.

2. LITERATURE REVIEW, GENERALIZATION OF MAIN STATEMENTS

The question of financial behavior was devoted to a sufficiently large number of works of domestic and foreign authors. But all the developments concerned financial the behavior of households. J. Keynes [1], F. Modigliani [2], J. Tobin [3], M. Hardy [4], W. Sharpe [5], T. Schultz and others, made a significant contribution to the formation of the theory of household finance.

Theoretical aspects of the financial behavior of the population, including in terms of the effectiveness of decision-making, are defined in the studies of Ukrainian authors T. Kizimi [6], V. Fedosov, I. Lomachinskaya, O. Dragan, V. Tropin, I. Chugunov, and others.

However, as mentioned above, the most frequently mentioned studies concerned financial decisions of citizens and households; but their associations, formed on a territorial basis, taking into account the place of residence, in fact, in this aspect are only beginning to be studied.

As for the term "financial behavior", he entered the scientific circulation primarily with regard to the definition of certain types of activity of the population (households) in the financial market. Therefore, the most widespread definition of it is the representation as a form of activity of individuals and separate social groups in the financial market, related to the redistribution, in particular, the investment, of cash resources [7]. Some authors branch out from its characteristics through the prism of investment, treating it as a system of actions of individuals and social groups in the financial market for the purpose of the maximum profitable use of their available monetary resources [8]. Although activity in the financial market is predominantly of an investment nature, it is possible to maximize profits through various short-term or one-time speculative operations, etc. Beyond the boundaries of the financial market, the financial behavior of the population is considered, explaining its essence as the use of cash outside of current consumption [9].

A wider understanding of the essence of financial behavior of individuals and households belongs to the development of Ukrainian authors T. Kizima, I. Yakushik, I. Lomachinskaya and O. Dragan, as well as one of the co-authors of this publication [10], which, together with the previous three, conducted the relevant research.

In particular, T. Kizima submits the corresponding definition "as the activity of households related to the allocation and redistribution of cash resources, resulting in the formation of appropriate monetary funds (individual and common funds of consumption, a reserve fund, savings fund, etc.) and their use for certain purposes" [6]. As the author notes, there are also such aspects of the financial activity of citizens as consumer, fiscal, charitable, etc. In favor of this view, existing developments in the field of the economic and sociological analysis indicate that financial behavior is "a variety of external manifestations of the use of money aimed at achieving different goals in the context of formal and informal rules and social relations" [11].

In a collective monograph with the participation of one of the co-authors of this article V. Melnyk and I. Yakushik, I. Lomachinskaya, O. Dragan under the financial behavior of households, they consider an even broader range of actions, not limited to the distribution and redistribution of those available to these entities cash resources, but also including the formation of their income. The authors point out that "the financial behavior of households should be understood as individual decisions regarding the formation of cash incomes, their distribution and use in order to meet individual social and economic interests" [10].

Analyzing given definitions, it should be noted that the following essential aspects are clearly perceived:

– financial behavior as a certain set of actions, decisions in modern socio-economic conditions are typical for individuals, households, social groups, and therefore can be considered for associations of citizens formed by territorial or some other feature in order to solve common problems or achieve a common goal or a specified set of goals;

– the interpretation of financial behavior in the broad sense implies actions and decisions on the formation of cash, their distribution and use in order to satisfy the interests of the entity demonstrating this behavior, achieve certain economic and social goals.

3. Discussion

Since the united territorial community is a voluntary association of inhabitants of different settlements in one administrative center, it is a social group formed by a set of individuals according to the criterion of the place of residence. Consequently, according to the selected essential aspects of financial behavior, the united territorial community can also be considered as the subject of its formation and implementation. Taking into account the specifics of the finances of the mentioned administrative-territorial units, the financial behavior of the united territorial community is the decision taken by the residents jointly with regard to the formation of cash incomes, their distribution and use in order to meet the socio-economic interests of the community and its members, as well as a set of administrative actions on the implementation of these decisions.

Analyzing the financial practice of the united territorial communities, one can notice a large similarity of the types of financial behavior with households. This can be explained by the fact that they consist of a relatively small number of households, which are united administratively and territorially. Although sources of cash-flow and spending patterns differ from households, management behavior combines psychological and mental approaches of individuals and separate methods developed by the state.

Based on this, depending on the attitude towards the common goals of the community and the use of methods for achieving them, the following models of financial behavior are distinguished: passive-consumer; consumer-saving; active-investment.

In the first model, the community seeks to solve current problems mainly by concentrating available resources on their financing. Search for additional resources is not carried out; in case of the lack of funds, hopes for transfers from other budgets are relied upon. At the same time, the community has: assets that, due to underestimation, bring in insufficient incomes in comparison with the potentially possible; unused assets in the economic circulation, the opportunities of which nobody cares; illiquid assets for which there is neither strategy for increasing their public and market value, nor options for reducing their conditional fixed costs associated with their existence.

In the second model, the community is more diversifying its financial behavior, but mainly on cost issues. It tries to save money, directing them to a wider range of solvable problems. At the same time, assimilation of funds takes place at a rapid pace, securing from possible their depreciation due to changes in the value of goods and services during the budget year. However, the diversification of sources of funds does not occur or it's quite sluggish, especially with respect to incomes from underestimated property objects, etc.

In the third model, financial behavior is maximally diversified. Active strategies for attracting revenues from all possible sources (including grants) and from maximizing the use of all available assets are being developed, the use of funds is economical, cash-flow operations for their passive deposit storage are not considered, preferring investment in infrastructure and other objects.

Also, the models of financial behavior of the united territorial communities may vary depending on the nature of the municipal management. In this case, it is necessary to point out the following types of financial behavior: rational; traditionally patriarchal; affective-irrational.

For the first type, the financial management of the united territorial community is based on clear planning, analytical approaches and the use of reasonable cost-saving regimes. According to the second type, stereotypes of previous generations, ethnic and religious peculiarities of the community, the use of which in today's conditions is economically unjustified and incapable of causing social development effects, is used to a large extent in developing strategies for the accumulation of funds and their spending patterns. In the third type, financial decisions are made situationally, the laws of financial activity are ignored.

In general, in today's domestic conditions, as part of the formation of revenue united territorial communities plan tax- and non-tax revenues to the budget, revenues of utility companies, etc. The procedure for such actions is clearly regulated by the current legislation of Ukraine (especially with regard to the establishment of local taxes and fees, the formation of intergovernmental transfers), and the lost opportunities (in terms of income from disposal of property and commercial activity of utility companies) are monitored by the State Audit Office and measures for their renewal are being developed (albeit with a break in time that is inevitable for retrospective control). In the case of the use of funds, there is a bigger opportunity to take the initiative, as decentralization processes involve the gradual expansion of the capacity of the united territorial communities to determine the priority of a number of budgetary expenditures and investment activity. The use of funds in today's conditions for them is a bigger stimulus than the accumulation because it involves the choice of perspective directions, forms, the order of financing. Therefore, this particular issue was chosen by us as an object of analysis in this publication.

It is important to determine which key factors influence the financial behavior of the united territorial communities in Ukraine in terms of the priority of their budget expenditures and investment activity. To do this, we will analyze the indicators of the area and population of these communities, their own revenues (since it determines the possibility of financing expenditures, especially investment), the level of dotations (the share of dotations in income) and capital expenditures (Table 1). To do this, we use the data of the Financial Monitoring Group of the Central Office of Reforms under the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine about 665 united territorial communities in 2018.

№	Population (thousands of people)	Area (square km)	Average own revenue of UTC (mln. UAH)	Maximum level of dotations (%)	Average capital expenditures of UTC (mln. UAH)
1	More than 15	35-2011	75,5	47,6	22,4
2	10-15	34-1004	47,0	54,8	15,5
3	5-10	32-927	26,1	57,9	9,5
4	Up to 5	29-557	14,2	60,3	4,8

Tab. 1. Factors of financial behavior of the united territorial communities of Ukraine in terms of priority of their budget expenditures and investment activity. Source: developed by the authors.

To monitor the dependence of income indicators, dotations and capital expenditures on the size of the united territorial community, we will construct corresponding schedules, the inclination of which will show the nature of such dependence.

Thus, for the reasons given in Figure 1, it can be concluded that with the increase in the size of the united territorial community, as a rule, its own revenues and capital expenditures increase, and the level of dotations decreases. That is, the financial behavior in terms of the sources of financing of expenditures and investment activity at the current stage in Ukraine is determined by the scale of the mentioned entities. The largest communities – with a population of over 15 thousand people - have the opportunity to receive higher own revenues and, accordingly, are least dependent on dotations from the state budget of Ukraine. Their capital expenditures are the highest. The reverse situation is observed in communities with a small population and area. «Such communities do not have sufficient labour potential for their development and good governance. An exception is made by separate communities, in the territories of which there are budget-setting enterprises and powerful enterprises of the real sector of the economy» [12].

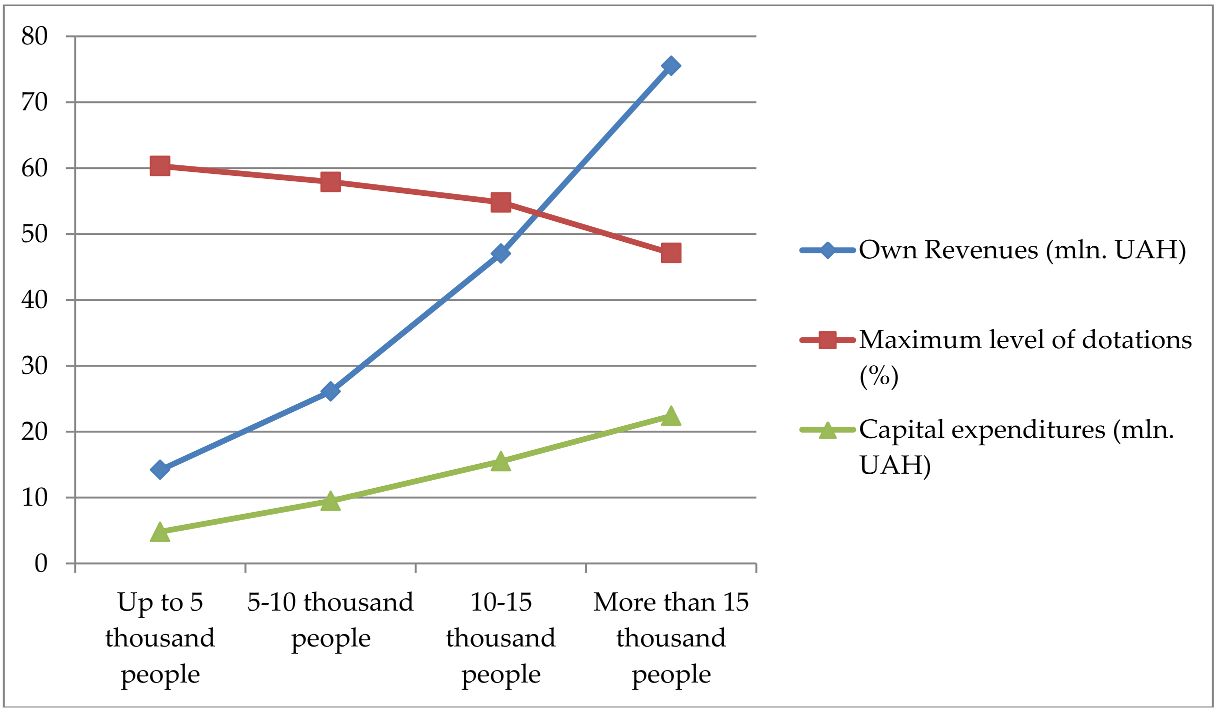

Fig. 1. Change in own income, level of dotations and capital expenditures depending on the size of the united territorial communities. Source: developed by the authors.

Proceeding from the above, the preconditions for the formation of optimal financial behavior of the united territorial communities in matters of priority of budget expenditures and investment activity are:

1. Increase in own revenues (as sources of financing of expenditures, including investment) and increase of financial independence of local self-government bodies, which in turn actualize:

– search for their own paths to strengthen financial potential;

– preparation of attractive proposals for investors and increasing the number of jobs.

2. The further consolidation of small territorial communities and the formation of communities with larger areas and population, which, even in the face of insufficient financial potential, will open up opportunities for:

– optimization of the territorial structure of local self-government bodies;

– improvement the management efficiency and directing the money saved on it to other priority areas of financing;

– improvement of investment attractiveness due to the concentration of a large volume of labour and land resources in one subject.

Also, the analysis of the practice of functioning of the united territorial communities in Ukraine testifies to the need to implement a number of organizational measures designed to optimize their financial behavior in matters of priority of budget expenditures and investment activity.

First of all, it concerns the organization of strategic documents. In particular, the development goals contained in them are often indicated formally and do not correlate with each other and with the expenditures of the local budget. Without a strategic managerial vision, it seems problematic to expand the existing or attract additional sources of revenue, optimize costs and dispose of community assets.

In addition, the realization of strategic directions of development is impossible without building the trust of households in local self-government bodies. In this context, it is important to ensure public participation in public hearings and discussions, including budget issues, engage civic activists in decision-making processes and ensure the informational openness of the leadership of the united territorial communities (in spite of existing personal political risks).

An important part of the formation of financial behavior of the united territorial communities is the optimization of the current budget expenditures, which will increase investment opportunities. In particular, the high costs of education and medicine in many communities are not dictated by the goals of social development but are caused by a non-optimal network of institutions. Therefore, the continuation of measures for its optimization will enable the redistribution of the local budget in favor of capital expenditures and development costs [13].

In this context, also need to be resolved: the issues of procurement activity of united territorial communities, the realization of which in a number of examples demonstrates violation of the current legislation and conflict of interests; the issue of improving the management of community assets, primarily on the basis of inventory and control over the use of land and other property. This, in turn, necessitates the construction of a system of internal control, including the introduction of mechanisms for public audit.

It should also be noted that local councils of united territorial communities have the right to borrow (from both domestic and international financial organizations) to finance their expenditures, which can not be financed from existing sources of funds available at the moment. That is, in the long run, they can become important participants in the financial market, and their financial behavior will significantly affect the redistribution of investment resources. Borrowed funds will be directed to the development budget in order to spend on implementation of investment projects in the field of communal infrastructure, resource conservation, construction and renewal of long-term objects of strategic importance, used by local councils to fulfill tasks for satisfying the interests of the population.

There are a number of restrictions on the execution of local borrowings, which have an impact on the financial behavior of the united territorial communities in this regard. In particular:

– the amounts and conditions of local borrowing, as well as the provision of local guarantees, must be agreed with the Ministry of Finance of Ukraine. Obviously, this is due to several objective reasons – the lack of local analysts; allocation of transfers from the state budget to finance the expenses of the united territorial communities, which necessitates control over their financial behavior and the policy of formation and spending of budget funds;

– the cost of servicing local debts cannot exceed 10% of the general fund's expenditures of the local budget;

– the borrowing in the form of bonds under the current legislation is allowed only to urban communities.

In the process of the formation of the financial behavior of the united territorial community, it should be taken into account that there are several ways to implement local borrowing, that is, the latter can exist in the following forms:

– loans from banks and other lending institutions and financial companies (as a rule, these loans can be used in the financing of small amounts of money and short-term projects, which is conditioned, among other things, by the unreadiness of commercial financial institutions to lend to predominantly subsidized municipal self-government bodies);

– bond loans (for the urban communities that can issue municipal bonds in paper or electronic form) (as a rule, are intended to finance long-term municipal investments: development of electricity supply, water supply and sewerage systems, transport networks, construction of educational, health care, culture or sports institutions, etc. Interest rates and maturity of the bonds are determined by market conditions);

– mutual loans of local self-government bodies (intended to cover temporary cash disruptions);

– medium-term loans from a single treasury account (treasury loans) (appointment is similar to the previous one).

Recently, thanks to the integration of Ukraine into the EU, a new form of local borrowing – loans from international financial institutions – appears. They can be obtained directly by united territorial communities or through the mediation of a domestic bank. The scope and conditions for the implementation of such borrowings are also subject to approval by the Ministry of Finance of Ukraine. At the same time, if the Ministry of Finance has not made any decision within a month from the date of submission of the documents, the loan is considered as agreed.

Local debt servicing may sometimes be crucial for taking into account the financial behavior of the united territorial communities. The standard option is servicing through the budget. However, if the funds were spent on creating a profitable object, debt servicing could be carried out through the mechanism of state securitization of cash flows, in which profits from an object accumulate on a special account and repayment of a loan is carried out. Upon full payment, the proceeds are directed to the community accounts. As a rule, such a mechanism is applied to a bond loan [14].

An important direction in the formation of the financial behavior of local governments of the united territorial communities is the providing of grants. They provide a certain impulse for the start and development of investment activities. The placement of grants from international institutions, interstate organizations, government donors of foreign states, public, private, corporate donors, charitable foundations and public organizations (including domestic ones) is ongoing. The task of community leaders is to monitor the announcement of competitions, the well-timed preparation of the necessary documents and the providing of participation. This allows to solve a number of socio-economic issues, such as: improvement of settlements, territories of general use and separate social objects; development of business (for example, agricultural, small and medium) on the territory of a united territorial community; development of local transport infrastructure; creation or restoration of ecological infrastructure; restoration of water resources management infrastructure; promotion of sustainable types of transport that do not produce or produce a low negative impact on the environment; improvement of providing of communal and domestic services; development of marketing infrastructure; introduction of energy-efficient technologies in the territory of a united territorial community (for example, development of "green" energy, production of alternative fuels); introduction of projects to improve the disposal of community property (for example, lease programs that increase the income from lease of community land); purchase of new equipment; introduction of new information technologies; development of information and communication solutions; designing of objects and development of technical documentation; carrying out of engineering researches; involvement of experts, consultants; expert support for creating a supportive business environment in the community; carrying out of studies; improvement of social infrastructure; realization of educational projects aimed at development of certain competences and skills of children and adults; support of the system of primary health care; introduction of social projects aimed at supporting vulnerable groups of the population; improvement of housing sector management; preventing unregulated labor migration by creating new jobs; development of youth, public sector, volunteering, social and public initiatives; promotion of cooperation and mutual understanding between youth; promotion of mutual assistance; promotion of information exchange; information and public events; etc [15].

Unfortunately, there is no consolidated information on the amount of received and assimilated grants by united territorial communities in Ukraine, so it is not possible to carry out a quantitative analysis of the financial behavior of the communities on this issue. It can only be argued that due to the lack of professional education of management personnel, a number of communities do not use these capabilities, the relevant information is not monitored and documents for participation in the competitions are not provided. Although the All-Ukrainian Association of Town and Village Councils conduct relevant information events and disseminates the necessary information. The Association maintains on its website a special web-page «Grants», which concentrates all the announcements on grant competitions and terms of participation in them. The same is done by regional state administrations on their sites, providing information on grants available on the territory of the region.

The implementation of important investment projects also involves the pooling of resources of various united territorial communities based on the use of the mechanism of inter-municipal cooperation. It is advisable to use it in cases where one of the local problems is common and at the same time goes beyond the powers and capabilities of each individual community. Then there may be entered cooperation agreements, joint coordination bodies or joint utilities formed, the task of which may be the implementation of one project or long-term cooperation. Today, such cooperation is not widespread and is widely practiced. And the reasons are not only in the lack of funds (exactly this problem is solved by uniting efforts) but also in the absence of sufficient knowledge and experience from local authorities and specialists of municipalities.

As a whole, the evidence shows that the task of optimizing the financial behavior of the united territorial communities in terms of priority of budget expenditures and investment activity actualizes the problem of raising the level of financial literacy and financial culture of the population and the leadership of local self-government bodies. Receiving them at least basic financial knowledge and skills would increase their competence and significantly increase the efficiency of financial decisions at the local level. It should be noted that Ukrainian universities and public organizations have prepared training materials for local government officials on the planning and management of the financial resources of the territorial community, the formation of budgets of territorial communities, and the specifics of managing the development of united territorial communities, etc. They serve to solve this problem by revealing at the popular level various aspects of the formation and use of financial resources of territorial communities, improvement of expenditures of local budgets, opportunities of local self-government in forming their incomes, solving problems of territorial communities through transfer policy, improving the financial condition of communal enterprises and participation of local authorities in their management, use of land resources and other types of property, strengthening financial control at the local level, attracting potential sources of funds for territorial communities, and eliminating corruption in the area of the formation and use of financial resources of local self-government bodies. However, the activity of their use so far leaves much to be desired. Although the motives for financial behavior are determined primarily by the needs of the united territorial communities in terms of consumption and investment, it reflects both the financial interests of the community and its members and socially significant requirements, but a complete understanding of these requirements and almost professional judgment of the interests and means of balancing them will help to get closer to meet the needs.

4. CONCLUSIONS

Consequently, it should be noted that the united territorial communities can also be considered as subjects of the formation and implementation of financial behavior, which in essence represents a decision taken by the residents jointly in relation to the formation of cash incomes, their distribution and use in order to meet socio-economic interests of the community and its members, as well as a set of administrative actions for the implementation of these decisions.

Models of financial behavior of the united territorial communities are distinguished depending on the attitude towards the common goals of the community and the use of the methods of their achievement (passive-consumer, consumer-saving and active-investment), as well as depending on the nature of the municipal government (rational, traditionally patriarchal, affective – irrational). The scale of the community (which is characterized by indicators of the area and population size) is a major factor affecting the financial behavior of the united territorial communities in Ukraine in terms of the priority of their budget expenditures and investment activity. It has a substantial effect on the volume of own revenues, which form the possibility of financing costs (especially investment), the level of dotations and capital expenditures. As the size of the united territorial community grows, as a rule, its own revenues and capital expenditures increase, and the level of dotations decreases.

Therefore, the main precondition for the formation of optimal financial behavior of the united territorial communities in terms of priority of budget expenditures and investment activity is the further consolidation of small communities and the formation of communities with larger areas and populations.

References

[1] Keynes J.M. *The general theory of employment, interest and money*. Macmillan, London, 1973.

[2] Modigliani F., Brumberg R. Utility analysis and the consumption function: an interpretation of cross-section data. In: Kurihara K. (Ed.) *Post Keynesian Economics*. New Brunswick: Rutgers University Press, New York, 1954, 388–436.

[3] Tobyn Dzh. *Monetary policy and economic growth*. Trans. from Eng. Moskow, 2010. (in Russian)

[4] Hardy M., et. al. Tax increment financing, 2016. Available at: https://www.coalitionforalivablecityvt.org/wp-content/uploads/2016/10/Tax-increment-financing.pdf

[5] Sharpe W.F. Mutual Fund Performance. *Journal of Business*, **39** (1) (1966), 119–138.

[6] Kizima T. Financial behavior of households: essence, classification, factors of influence. *The world of finance* (4) (2011), 19–26. (in Ukrainian)

[7] Efremenko T. Financial behavior of the population of Ukraine. *Sociology: theory, methods, marketing*, **2** (2002), 165–175. (in Ukrainian)

[8] Verkhovin V.I. *Economic Sociology*. Ed. by V. Demin. IMT, M., 1998. (in Russian)

[9] Tapilina V., Bogomolova T. *Financial behavior of Russian households*. ECO, 1998. (in Russian)

[10] Melnik V., Yakushik I., Lomachynska I., Dragan O. *Formation of financial behavior of households in Ukraine.* Helvetica, Kherson, 2014. (in Ukrainian)

[11] Zarubina N.N. *Economic Sociology*. Yurayt Publishing House, 2015. (in Russian)

[12] Kazyuk J., Wenzel V., Gerasymchuk I. *In large communities there are more opportunities: experts analyzed the budgets of 665 OTH for 2018*. Available at: https://decentralization.gov.ua/news/10649(in Ukrainian)

[13] Melnyk V., Kriuchkov, N., Shchur R. Peculiarities of forming total revenues of united territorial communities in Ukraine under current conditions of transforming the system of public finances. *Financial and Credit activity-problems of theory and practice,* **2** (33) 2020, 215–222. doi: doi.org/10.18371/.v2i33.2983 (in Ukrainian)

[14] Borshch H.A., Vakulenko V.M., Hrynchuk N.M., Dekhtiarenko Yu.F., Ihnatenko O.S., Kuibida V.S., Tkachuk A.F., Yuzefovych V.V. *Resource provision of amalgamated territorial community and its marketing*. Instytut hromadianskoho suspilstva, Kyiv, 2017. (in Ukrainian)

[15] Shchur R.I. *Finance of Amalgamated Territorial Communities During the Decentralization in Ukraine*. Monograph. Osavtsa Yu.V., Ternopil, 2019. (in Ukrainian)

[16] Storonyanska I.Z. Prospects and risks of strengthening the financial capacity of territorial communities in the context of administrative-territorial reform in Ukraine. *Economic Journal*, **XXI** (11-12) (2016), 84–88. (in Ukrainian)

[17] Shchur R.I. Estimation of financial capacity of the united territorial communities in decentralization conditions. *Modern Science-Moderni Veda*, **5** (2018). Praha, Ceska Republika, 69–75.

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Мельник Віктор, Щур Роман, Цюпа Оксана. Фінансова поведінка об'єднаних територіальних громад в умовах реформи децентралізації в Україні. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 68–77.

Статтю присвячено дослідженню особливостей функціонування об'єднаних територіальних громад в умовах децентралізації в Україні. Обґрунтовано поняття фінансової поведінки територіальних громад як основи прийняття ефективних управлінських та фінансових рішень, досліджено її особливості та моделі. Дослідження моделей та особливостей фінансової поведінки об'єднаних територіальних громад дає можливість оцінити та спрогнозувати вектори їх соціально-економічного розвитку, встановити причини дотаційності та можливості підвищення фінансової спроможності щодо формування власних видатків та здійснення тих функцій і завдань, які на них покладені. Результати дослідження підкреслили необхідність подальших наукових розвідок поведінкових аспектів формування фінансових ресурсів об'єднаних територіальних громад і обґрунтування їхніх фінансових рішень з метою залучення додаткових доходів. Реформа децентралізації в Україні активно почала впроваджуватися тільки починаючи з 2014 року шляхом створення об'єднаних територіальних громад. Автори дослідили сутність фінансової поведінки об'єднаної територіальної громади, що є основою для формування її фінансової спроможності, стійкості та соціально-економічного розвитку. В результаті дослідження встановлено, що головним чинником, що впливає на фінансову поведінку об'єднаних територіальних громад в Україні в частині пріоритетності їх бюджетних видатків та інвестиційної діяльності, є масштаб громади (який характеризується показниками площі та чисельності населення). Також авторами доведено, що ключовими мотивами фінансової поведінки об'єднаних територіальних громад у питаннях пріоритетності бюджетних видатків та інвестиційної діяльності є наступні: збільшення власних доходів, підвищення фінансової незалежності органів місцевого самоврядування, що у свою чергу актуалізує пошук власних шляхів зміцнення фінансового потенціалу та підготовку привабливих пропозицій інвесторам та збільшення кількості робочих місць, а також подальше об'єднання дрібних територіальних громад.

Ключові слова: бюджетна децентралізація, об'єднана територіальна громада, фінансова поведінка об'єднаної територіальної громади, власні доходи, рівень дотаційності.

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FORMATION OF INVESTMENT POTENTIAL AS A FACTOR IN THE DEVELOPMENT OF IVANO-FRANKIVSK UTC

ANTONINA TOMASHEVSKA

Abstract. One of the key tasks of the current government is to develop the regions and strengthen their economic potential. One of the most important factors of economic growth is investment. For Ukraine, which is in a crisis pit, the issue of attracting foreign investments is especially important and relevant, as they have a significant impact on the economic development of the country. At the same time, the largest degradation in Ukraine today is investment activity, which is also due to the outbreak of COVID-19. Deterioration of the investment climate, the possibilities of budgets at all levels, the decline in business activity of economic entities have led to a difficult state of the investment sphere.

The article analyzes the investment attractiveness of the regions of Ukraine. A special role is focused on the factors (positive and negative) that affect the formation of the investment climate of the regions: positive - geographical location, labor resources; negative - unfavorable climate and corruption.

One of the indicators that reflects the stable economic development of certain sectors of the economy, as well as the country's economy as a whole is the investment potential of the regions. The investment and foreign economic policy of Ivano-Frankivsk UTC is analyzed, which is aimed at improving the image at the regional and international levels, promoting a significant increase in domestic and foreign investment in economic development, the implementation of active information and promotional activities.

In the city, foreign investment is about 580 million dollars. US dollars, of which almost 80 million dollars. USA - loan capital. During the study, we analyzed the largest enterprises in Ivano-Frankivsk, including foreign investment, LLC "Electrolux Ukraine", LLC "Tyco Electronics Ukraine Limited", SE VO "Karpaty" (Delphi project), LLC "Imperial Foods".

The method of expert assessments indicates promising areas of business development of Ivano-Frankivsk UTC. In the course of the research we suggested ways to improve the investment attractiveness of Ivano-Frankivsk UTC.

Keywords: investment potential, investment attractiveness of the region, UTC.

JEL Classification: J5, Q12

1. INTRODUCTION

Investment potential is the main condition for the formation of the investment climate in the region. In modern science, much attention is paid to the study of the essence of the investment potential of the region, in general, domestic economists do not have a specific understanding of the essence of the "investment potential of the region" of a single position on the interpretation of this complex economic category.

In scientific works we often see attempts of some authors to define the investment potential of the region as "compliance of the region with the main goals of investors, which are profitability, risk-free and liquidity of investments" [11]; "The level of satisfaction of financial, production, organizational and other requirements or interests of the investor in a particular region" [12]. A. Asaul in his work gives the following definition: "the position of the region at one time or another, the trends of its development are reflected in investment activity" [1]. Ya. Zadorozhna and L. Dyachenko consider investment potential not only as a financial and economic indicator, but also as a model of quantitative and qualitative indicators - assessments of the external environment (political, economic, social, legal) and internal positioning of the object in the external environment [4].

2. THEORETICAL BACKGROUND

Research of the problem and study of the investment potential of the regions of Ukraine today becomes especially relevant. Theoretical and practical aspects of the investment potential of the regions were devoted to a significant number of works by leading domestic and foreign researchers, among them: O. Vlasyuk, O. Gavrilyuk, B. Gubansky, I. Dragan, G. Kalach, I. Blank. However, many problems of theoretical and practical nature in this area remain unresolved, which necessitates additional research to improve the investment potential of the regions.

3. RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The purpose of scientific work is theoretical substantiation, development of scientific and methodical bases and practical offers which are directed on increase of investment potential of Ivano-Frankivsk UTC.

In accordance with the goal in the work were identified and solved the following tasks:

– to reveal theoretical essence and feature investment potential;
– analyze the mechanisms for calculating the investment potential of the region;
– identify the main problems associated with the inflow of investment into the economy of Ivano-Frankivsk;
– identify ways to increase the investment attractiveness of Ivano-Frankivsk UTC.

Object of study: realization of investment potential of the region.

Subject research: theoretical and methodological and practical recommendations for increasing the investment potential of the region.

To achieve the goal and solve the main problems of scientific work, various research methods are used. The main general scientific research methods used by the author include: dialectical method of cognition; logical and formal-logical methods; method of comparison, generalization, systematization and synthesis (in the study of the theoretical essence of investment attractiveness); grouping, statistical, mathematical, graphical analysis (in the analysis of indicators of investment attractiveness); systemic and integrated approaches (in developing recommendations and improving the mechanism for increasing the investment potential of the region).

4. Results and Discussion

The outbreak of COVID-19 worldwide has largely led to a sharp decline in the value of financial assets. Despite some recovery in quotations at the end of the year, uncertainty remains extremely high. Regulators around the world have to deal with the consequences for the economy, and perhaps the main challenge is to coordinate the actions of monetary and fiscal authorities to prevent a liquidity crisis in the financial system.

Unfortunately, at present, no noticeable progress is seen against the background of the Ukrainian economic path (except for a short period, which our people chose after the Orange Revolution). For the whole of 2019, the total direct investment did not exceed 2 billion US dollars, and this figure decreased significantly compared to 2018. In addition, the vast majority of capital comes from jurisdictions such as Cyprus and the Netherlands, which in many cases is a transfer of money from the “offshore wallets” of Ukrainian business and can hardly be considered a real entry into the Ukrainian market of new foreign capital.

The investment potential of a particular region is formed under the influence of factors at the national and regional levels. National-level programs characterize the country's investment environment as a whole, and regional programs are specific to a particular city or region. In turn, among these factors are positive and negative.

Geographical location, labor resources, natural resources are positive regional factors that have a significant impact on the investment potential of the region. Unfavorable climate and corruption are negative regional factors that harm the investment environment of the region.

Ranking of regions according to the investment attractiveness index 2019 shown in Fig. 1.

According to A. Duka, the investment attractiveness of the country is determined by the following factors [5]:

– opportunity to gain a foothold in the promising market of Ukraine;

– the desire to make a profit on a long-term basis;

– access to relatively cheap sources of raw materials and resources, which increases the competitiveness of products by saving production costs and proximity to sources of raw materials;

– the use of relatively cheap and skilled labor as an important factor in reducing production costs and, accordingly, the cost of production.

Ivano-Frankivsk is one of the famous economic, cultural and industrial centers of Western Ukraine. The good geographical location of the city creates favorable conditions for multilateral development and European integration. For promoting European values, Ivano-Frankivsk received all four high awards of the Parliamentary Assembly of the Council of Europe - the European Diploma, the Honorary Flag, the Badge of Honor and the European Prize.

As you know, 2020, when the law on administrative and territorial organization enters into force, should be the year of completion of the program of community unification in Ukraine. The reform program is currently far behind the government's schedule and is unlikely by the end of 2020. the entire territory of Ukraine will be covered by UTC, as planned at the beginning of the reform. Therefore, various surprises are possible up to the centralized unification of small UTCs into larger ones. R. Panasyuk, Director of the Ivano-Frankivsk Center for Local Self-Government Development, rightly notes in this regard that there are also communities near Ivano-Frankivsk that are not provided for in the Perspective Plan for the Formation of Territories of Communities in the Region. The format in which they are now (only two entities in the union, the need for subsidies, a small area, proximity to Ivano-Frankivsk), may result in that these UTCs will not remain on the administrative map at all. Of the three possible options for them, R. Panasyuk calls joining Ivano-Frankivsk the “most logical” [14].

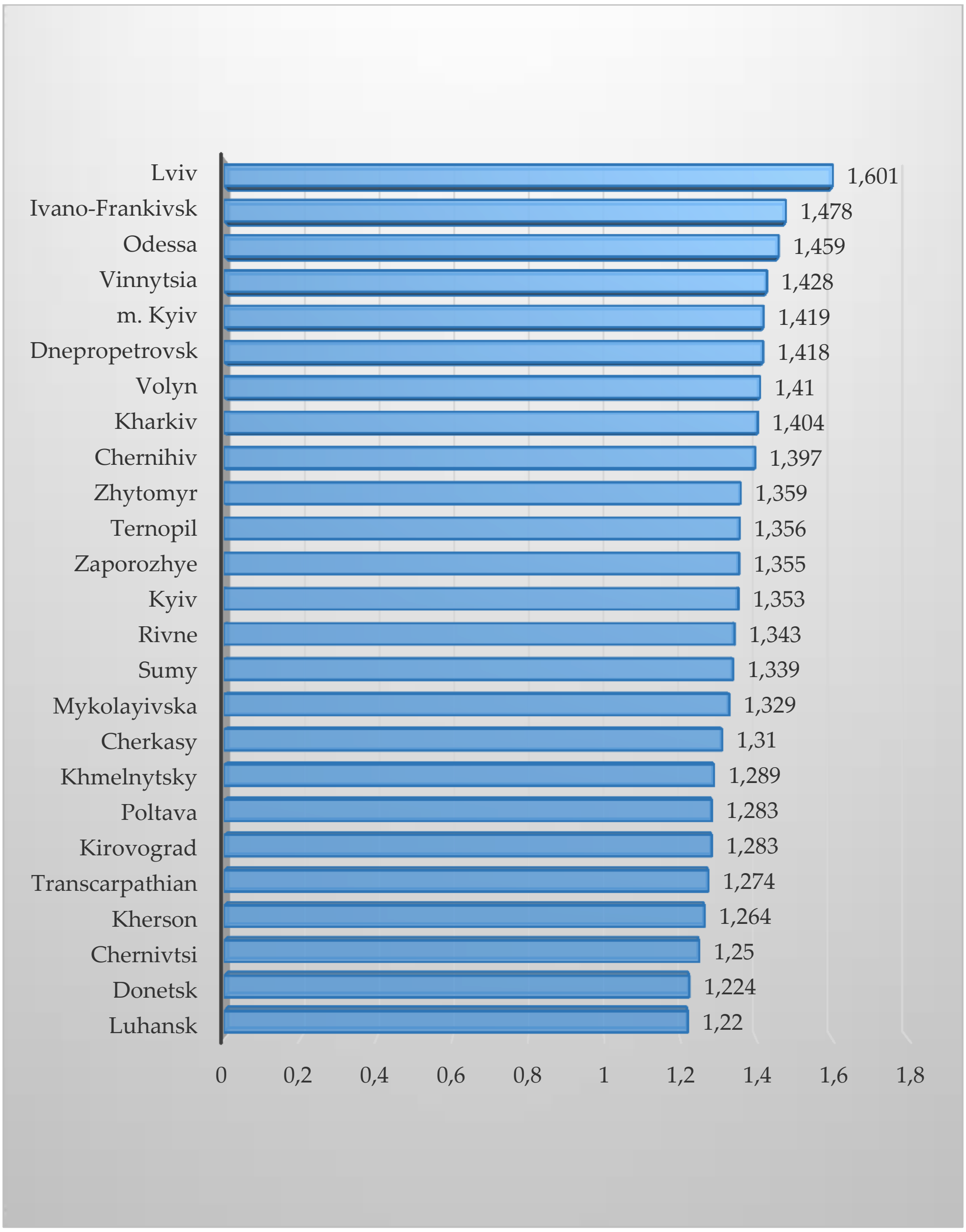

Fig. 1. Index of investment attractiveness of regions, 2019. Source: [12].

This opinion is confirmed by the conclusion of experts from the Swedish consulting company SKL International, which implements the Swedish-Ukrainian project "Support to Decentralization in Ukraine", and the U-LEAD with Europe Program. Experts based on the analysis of budget execution of 806 UTCs in Ukraine in January-June this year expressed the opinion that one of the best options for further development for communities with low financial capacity is to join other territorial communities and create a larger area and number of UTCs. Even if such an UTC does not yet have economic prospects for development, such an association will make it possible to optimize the territorial structure of local councils and increase the efficiency of their management and improve investment attractiveness through more territory and more manpower [14].

Among the advantages of Ivano-Frankivsk UTC are new investment zones for the city; larger funds of one of the instruments of state support for UTC development - infrastructure subvention, which the government distributes according to the formula according to the area of the community and the number of rural population, and therefore, the more rural areas united by the community, the larger the subvention; lands outside settlements that villages could not use on their own; reduction of the amount of reverse subsidy, which the city returns to the state budget; improvement of social services for villagers due to joining a financially viable city, etc.

The city of Ivano-Frankivsk has documented economic ties with 24 local governments abroad, including: Poland, Hungary, the Czech Republic, Moldova, Romania, Belarus, Lithuania, Latvia, the United States, Portugal, Georgia.

In Ivano-Frankivsk, about 20 international projects are being implemented under the programs of the European Union, the United Nations Development Program, the World Bank, the European Bank for Reconstruction and Development, and others.

Ivano-Frankivsk maintains investment attractiveness for investors, as evidenced by one of the highest rates of foreign investment per capita compared to the overall figure for Ukraine, which is almost 2 thousand US dollars. Foreign investors sent $ 498.1 million to the development of Ivano-Frankivsk. The United States, in particular, gives preference to enterprises in the processing industry and wholesale (92%) (Fig. 2).

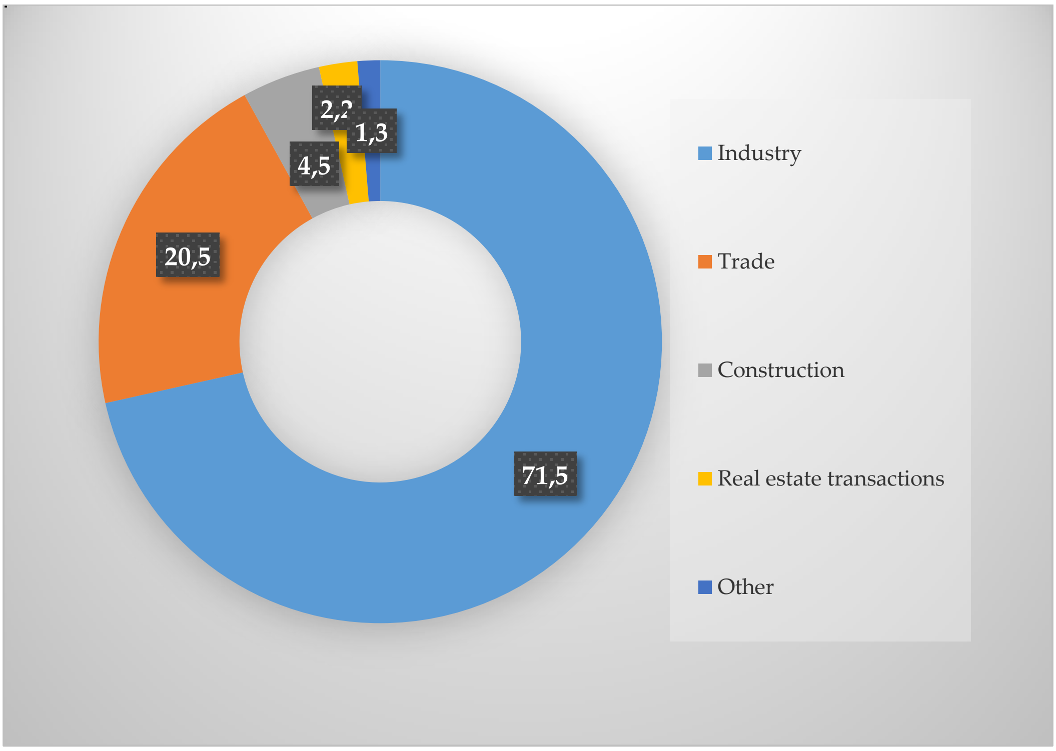

Fig.2. Structure of foreign direct investment in the economy of Ivano-Frankivsk.
Source: compiled by the author based on [12].

Ivano-Frankivsk enterprises are actively engaged in foreign economic activity with 90 countries. The main export sectors of the city's economy are machine-building, food and chemical industries, which account for 89% of urban exports. Thus, in 2019, Ivano-Frankivsk enterprises exported products worth $ 252.7 million. US dollars, and imported 232.4 million dollars. USA (Fig. 3).

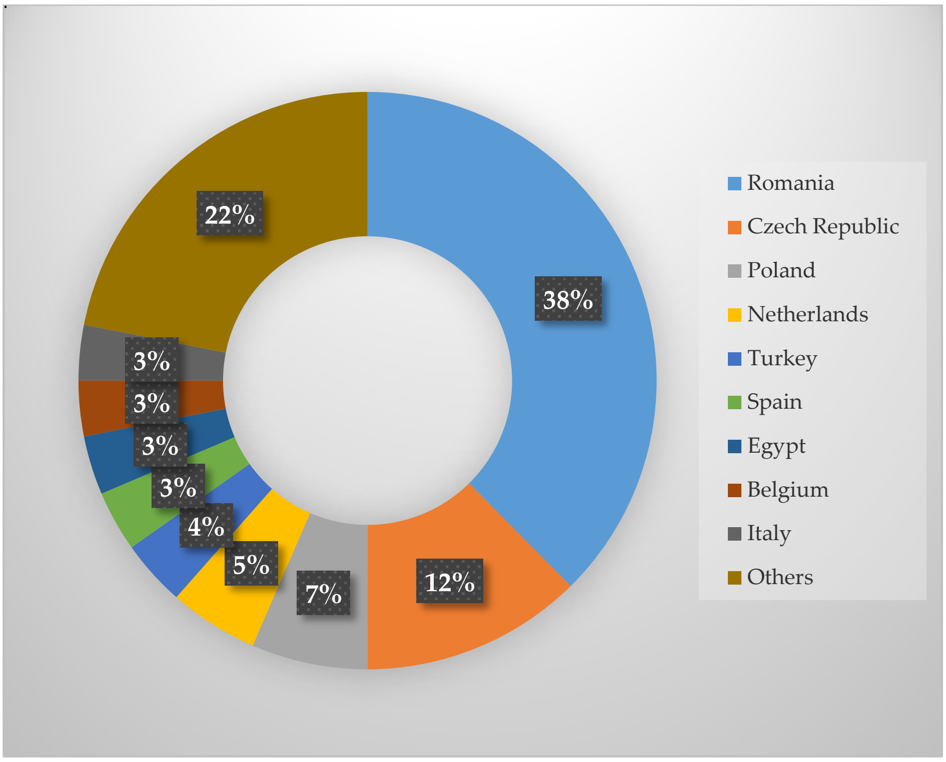

Fig. 3. The largest expert deliveries are in Ivano-Frankivsk. Source: compiled by the author based on [12].

First place in the ranking of transparency for investment in 2019. took the city of Ivano-Frankivsk, the second - Kiev, the third took the city of Vinnytsia. The Ukrainian office of the international anti-corruption network Transparency International has created transparency rating investment sphere of the hundred largest cities of Ukraine. Analysts tested how each city informs potential investors about how to invest in the city, how open the rules of the game are for investors and entrepreneurs and whether it is convenient for them to start a business [10].

The level of investment potential of Ivano-Frankivsk is due to:

1) Favorable location: Ivano-Frankivsk is close to the borders and well located relative to transit routes, including international ones. The city's prospects are also related to the location near the Carpathians (region of tourism, recreation and recreation). The potential for the development of tourism, balneology is high. The ecological situation in the city is good compared to other regions;

2) The city has the necessary infrastructure for the operation of enterprises of various economic activities. Developed market infrastructure, a network of financial institutions, educational, health and cultural institutions create a high quality of life compared to other regions and contribute to the mechanical growth of the population.

3) The labor market of the city is sufficiently provided with highly qualified labor resources. Improving scientific and human resources is provided by a wide network of higher and secondary special educational institutions that train specialists in various professions. The relatively low level of wages creates additional benefits for investors in terms of labor costs. Much of the population is quite mobile and employed in small and medium-sized businesses;

4) Developed communication infrastructure and good transport links. The city is a logistics center of the south-western region of Ukraine, has an extensive transport infrastructure and capacity for freight and passenger traffic; availability of access railways to enterprises, good condition of highways, operating international airport;

5) An acceptable level of development of communal infrastructure. However, it should be noted the need for major repairs of engineering infrastructure due to its deterioration, which is typical for most cities of Ukraine. At the same time, the city authorities are actively working to attract investment to improve the city's infrastructure;

6) Multisectoral specialization of industry, which provides relative resilience to fluctuations in the economic situation in the country. The city is developing its traditional branches of food, machine-building, woodworking industries, in which significant amounts of foreign investment have already been attracted. Multisectoral specialization of the city allows to carry out complex investment projects on the terms of economic cooperation;

7) Openness of local authorities to work with foreign and domestic investors, availability of preferences for investors, transparent administrative procedures, comprehensive support of investment projects. The city authorities have successful experience working with large foreign investors and international financial institutions. The rating agency believes that the degree of information transparency of the activities and activity of the city authorities is at a very high level. The activities of the government are aimed at the economic development of the city through partnership processes, creating conditions for long-term development, popularization of the city.

Ranking of factors of investment potential of Ivano-Frankivsk UTC is shown in Fig. 4.

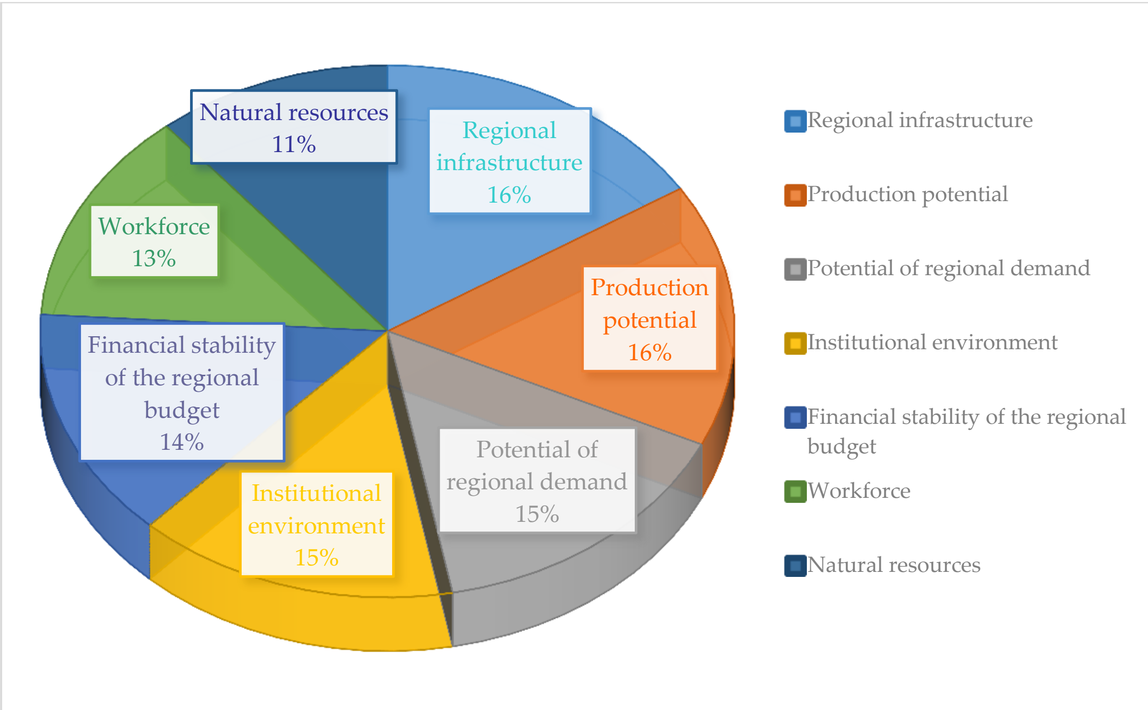

Fig.4. Ranking of factors of investment potential of Ivano-Frankivsk UTC.
Source: compiled by the author based on his own research.

The results of the assessment of the influence of various external factors on the investment attractiveness of Ivano-Frankivsk are generalized UTC are shown in Fig. 5.

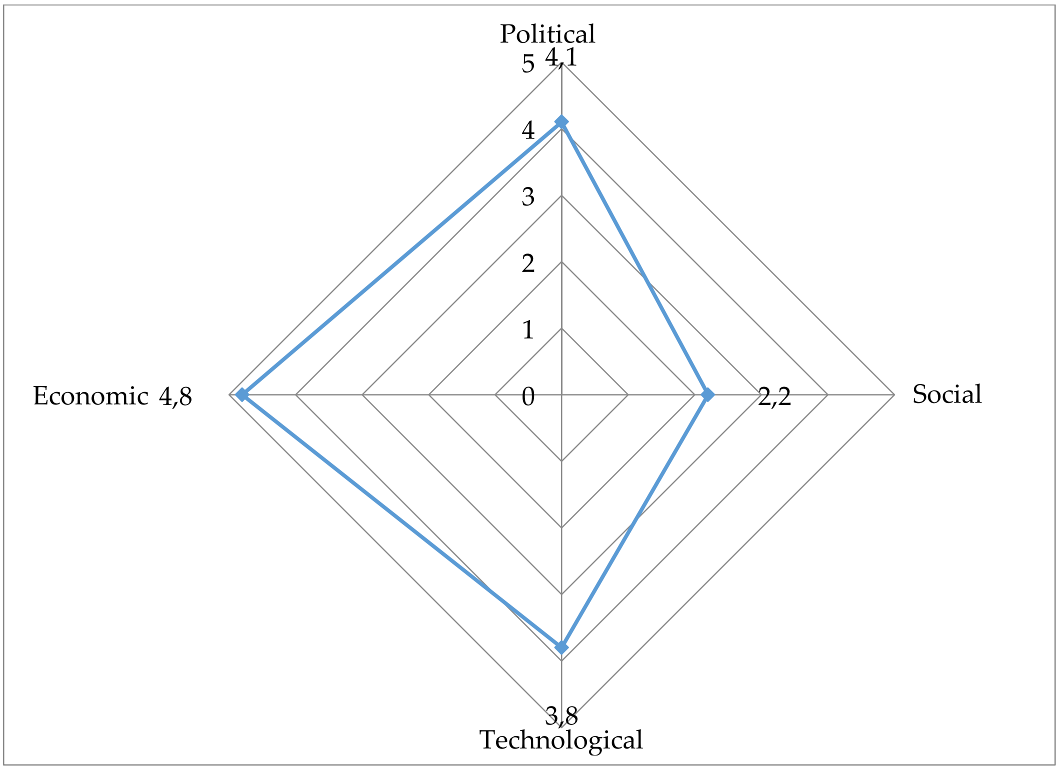

Fig. 5. Assessment of the impact of factors on the investment potential of Ivano-Frankivsk UTC.
Source: compiled by the author based on his own research.

During our research, a secret survey was conducted among 277 entrepreneurs and potential investors.

Issues that were addressed:

1. Name the most expected steps by the authorities for the development of entrepreneurship in Ivano-Frankivsk. In general, most noted the following problems:

– development of general infrastructure - 93%;
– improvement of services for entrepreneurs (especially electronic) - 92%;
– investment attraction - 89%;
– transparency in the management of communal property - 88%;
– transparency in land management - 86%;
– creation of service centers for entrepreneurs - 84%;
– improvement of access to information - 83%.

2. Among the biggest problems that hinder the work of entrepreneurs called:

– general economic situation - 66%;
– internal competition - 47%;
– energy costs - 27%;
– lack of skilled labor - 24%;
– lack of available funding - 18%.

3. Entrepreneurs were also asked to indicate promising areas of business in the city (Fig. 6)

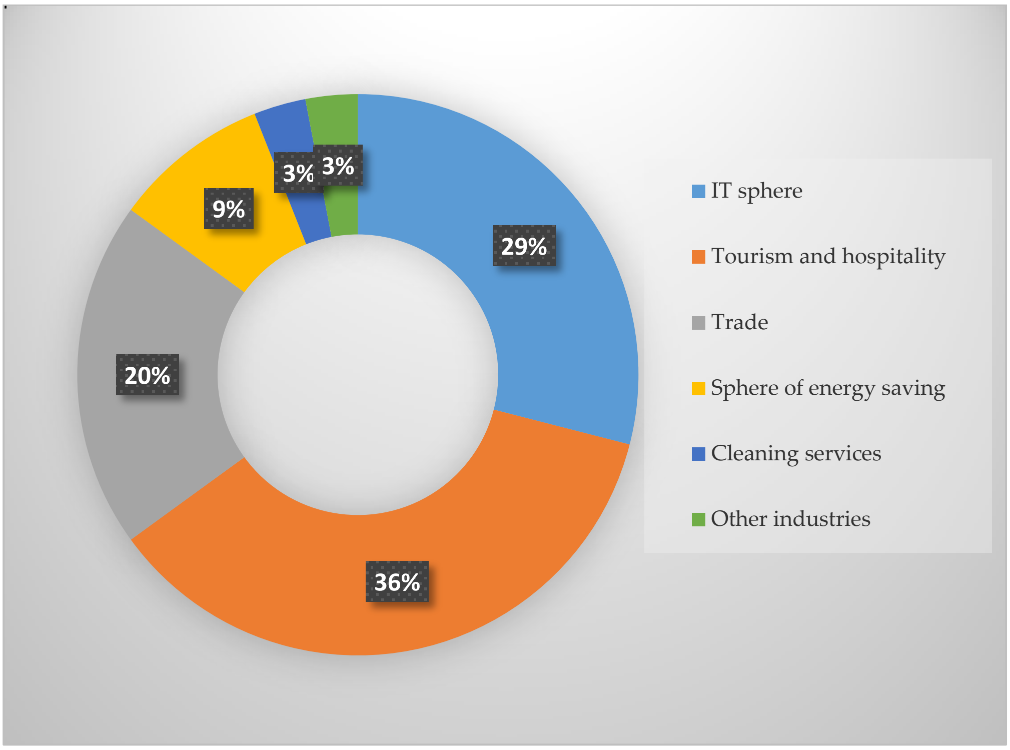

Fig. 6. Prospects for business development in Ivano-Frankivsk.
Source: compiled by the author based on his own research.

The main problem for foreign investors, in our opinion, is the presence of a corruption component at all levels.

If there is a risk of loss of fixed assets due to non-transparency of the procedure or corruption in the judiciary, the investor is not interested in the project even in the positive moments:

1) payback of projects in Ukraine - short;

2) cheap labor compared to the same Poland, the Czech Republic, Slovenia, but this is not a significant part of operating costs, which is not so significantly affects profits.

5. Conclusions

In the city, foreign investment is about 580 million dollars. US dollars, of which almost 80 million dollars. USA - loan capital. In the course of the research we proposed the following ways to improve the investment attractiveness of Ivano-Frankivsk UTC, in particular:

– specification of investment priorities, investment entities, the amount of investment and socio-economic consequences for the territory, the definition of entities and control mechanisms in the annual programs of socio-economic and cultural development of territories;

– constructive cooperation of local authorities with economic entities of the region (public-private partnership) and combining their efforts to attract an effective investor and achieve the desired concrete result;

– creation of an interactive map of the industry of Ivano-Frankivsk UTC (with a forecast analysis of the possibilities of promising areas of business, which were conducted in the study).

REFERENCES

[1] Gaidutsky A.P. Estimation of investment attractiveness of economy. *Economics and forecasting*, **4** (2004), 119-129. Availablte at: http://eip.org.ua/?page_id=523&aid=474 (in Ukrainian)
[2] The economy of the regions in 2018: new realities and opportunities in the context of reforms. NISD, Kyiv, 2018. Available at: http://old2.niss.gov.ua/content/articles/files/regionu-4adb9.pdf (in Ukrainian)
[3] Peresada A.A., Mayorova T.B., Onikienko S.V., Kovalenko Yu.M., Urvantseva S.V. Investment analysis. KNEU, Kyiv, 2008. (in Ukrainian)
[4] Osetsky V.L. Innovation and investment vector of socio-economic development: regional aspect. *RFI scientific papers*, **3** (2012), 183–185. Available at: http://nbuv.gov.ua/UJRN/Npndfi_2012_3_29 (in Ukrainian)
[5] Zavadsky G.M. Methodical approaches to assessing the investment attractiveness of the region. *Global and national economic problems*, **17** (2017), 152–155. Available at http://global-national.in.ua/archive/17-2017/34.pdf (in Ukrainian)
[6] *Rating of investment attractiveness of regions*. Inst. of Economic Research and Political Consultations. Available at: http://www.ier.com.ua/files/Projects/2012/investment/Investment_Report_Long_version2013.pdf
[7] The official site of the State Statistics Committee of Ukraine. Available at: http://www.ukrstat.gov.ua (in Ukrainian)
[8] Official site of the rating agency "Euro-rating". Methodology of rating of cities and regions. Available at: http://euro-rating.com.ua/regiony/metodologiya/ (in Ukrainian)
[9] Official site of the rating agency "IBI Rating". Available at: http://ibi.com.ua/RU/ratings-list/ (in Ukrainian)
[10] International Center for Policy Studies. Regional business environment in Ukraine. Available at: http://competitiveness.icps.com.ua/ (in Ukrainian)
[11] Fedorenko V.G., Zakhozhai V.B., Chuvardinsky V.G. *Insurance and investment management*. MAUP, Kyiv, 2002. Available at: http://fingal.com.ua/content/view/1167/87/ (in Ukrainian)
[12] Official website of the city of Ivano-Frankivsk. Available at: www.mvk.if.ua (in Ukrainian)

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Томашевська Антоніна. Формування інвестиційного потенціалу, як фактору розвитку Івано-Франківської ОТГ. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 78–88.

Одним із ключових завдань нинішньої влади є питання розвитку регіонів та посилення їхнього економічного потенціалу. Одним з найважливіших чинників економічного зростання є інвестиції. Для України, яка знаходиться в кризовій ямі, особливо важливим та актуальним є питання залучення іноземних інвестицій, оскільки вони мають вагомий вплив на економічний розвиток країни. Поряд з тим найбільшої деградації в Україні на сьогодні зазнає інвестиційна діяльність, яка зумовлена також і спалахом захворювання COVID-19. Погіршення інвестиційного клімату, можливостей бюджетів усіх рівнів, зниження ділової активності суб'єктів господарювання призвели до складного стану інвестиційної сфери.

У статті проаналізовано інвестиційну привабливість регіонів України. Особливу роль зосереджено на факторах (позитивних та негативних), які впливають на формування інвестиційного

клімату регіонів: позитивні - географічне розташування, трудові ресурси; негативні - несприятливий клімат і корупція.

Одним із показників, що відображає стабільний економічний розвиток окремих галузей економіки, а також економіки країни загалом є інвестиційний потенціал регіонів. Проаналізовано інвестиційну та зовнішньоекономічну політику Івано-Франківської ОТГ, яка спрямована на покращення іміджу на регіональному та міжнародному рівнях, сприяння істотному збільшенню надходжень внутрішніх і зовнішніх інвестицій у розвиток економіки, здійснення активної інформаційно-промоційної діяльності.

В місті іноземні інвестиції складають близько 580 млн дол. США, із них майже 80 млн дол. США – позичковий капітал. Під час дослідження нами було проаналізовано найбільші підприємства м.Івано-Франківськ, зокрема і з іноземними інвестиціями, ТОВ "Електролюкс Уукраїна", ТОВ "Тайко Електронікс Юкрейн Лімітед", ДП ВО ,"Карпати" (проєкт Делфі), ТОВ "Імперово Фудз".

Методом експертних оцінок зазначені перспективні напрями розвитку бізнесу Івано-Франківської ОТГ. В процесі дослідження нами запропоновано шляхи покращення інвестиційної привабливості Івано-Франківської ОТГ.

Ключові слова: інвестиційний потенціал, інвестиційна привабливість регіону.

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IMPROVEMENT OF INVESTMENT SUPPORT FOR HUMAN CAPITAL DEVELOPMENT IN THE CONDITIONS OF DIGITAL TRANSFORMATION

INNA IRTYSHCHEVA, ANTONINA TRUSHLYAKOVA

Abstract. The features of investment in the development of human capital in Ukraine at the regional level, in the private sector and at the household level have been investigated. It is noted that the state acts as the main investor in the formation and development of human capital, financing the main expenses in the field of education, medicine, cultural and physical development and social security. However, state policy in the context of limited financial resources and their irrational use does not contribute to the effective development and reproduction of human potential in accordance with the needs of the digital economy. Despite the nominal increase in social spending, their structure is irrational, and the spending itself do not consider as investment. An insufficient level of investment activity in the field of investment in human capital observe at the corporate and individual levels. It has been determined that the main incentive for the development of human capital affects the formation of a motivational basis at all levels is the purposeful, consistent and pragmatic activity of state authorities aimed at implementing a certain development strategy for the country, ensuring its security and macroeconomic stability. An important condition is also the creation of a regulatory framework that is adapted to the specifics and realities of economic and social transformations in the context of digitalization, the regulation of labor relations, and the preservation of social and investment guarantees. To regulate and intensify investment activities, a model of investment support for the human capital development is proposed. It involves the redistribution of investment resources in accordance with the subjects of investment and the expected results of the investment process, forms and criteria for assessing individual components of human capital at different stages of the life cycle, together form a general model of financing it development and reproduction at all levels.

Keywords: investments, investment support, human capital, digital transformation, digitalization.
JEL Classification: J24, J41, O15.

1. INTRODUCTION

Human capital is one of the key factors in ensuring economic growth and competitiveness of the national economy. Ensuring the effective development and use of human capital in the national economy in the context of digitalization requires the development of an investment strategy aimed at meeting the economy needs in the human capital development and its continuous reproduction on a new qualitative basis, with appropriate adaptive abilities to new challenges in a transformational environment.

Human capital is the most significant component in the digital economy development; it acts as the driving force behind transformation processes, the main source of competitive advantages and determines the main vector of socio-economic transformations that meet the development trends of the global market. Based on this, the concept of improving the mechanisms for the national transport and logistics system development requires additional research.

2. Literature Review, Generalization of Main Statements

The formation and accumulation of human capital requires large material and other costs from the state, enterprises and citizens. This applies to both education and other areas of its formation. Such costs can be estimated only partially, but even such an approximate estimate indicates that the value of accumulated human capital exceeds the size of material accumulation, and the rate of intangible accumulation determines the rate of economic growth of the country [1].

World experience has proven that investment in human capital is the main core, forms a multiplier effect for the knowledge economy development and contributes to progressive transformations of socio-economic systems on the way to a new technological order.

As noted by O. Hizelo, "A characteristic feature of investing in human capital is that a person is not only an object of investment, but also its purpose. So, the development and expansion of educational, intellectual, informational, organizational, managerial, motivational resources, the view of a person as the main, determining and qualitatively inexhaustible factor of growth of a new type, as well as the goal of this growth, is a distinctive feature of our time" [2, p. 12].

Thus, it is investment in human capital in the context of implementing the strategy for sustainable development of the national economy and society in the context of digitalization that is the main generator of progress in this direction and one of the defining conditions for effective adaptation of human development to changes. At the same time, today in economic thought there is no consensus on the definition of the investment concept in human capital, which explains by certain features, including:

– intangible nature of investments depends on the investment object, its natural abilities, skills and self-motivation;

– invisibility of investments from their object, that is, the object of investments, unlike material and financial resources, cannot belong to the subject of investments;

– ability of the investment object (by which we mean human capital) in self-investment;

– specificity of the investment cycle, conventionally divided into the stages of the life cycle of human capital and requires investments of various forms and content;

– complexity of assessing the future value of investments, largely depends on the personality, natural abilities, character, temperament of carriers of human capital, their motives of behavior, etc.;

– return on investment is determined by the remaining until the end of the working period of a person's life;

– severity of determining the economic and social feasibility of capital investments in a person, because not all such investments can lead to the expected effect.

In classical economic theory, investment in human capital is defined as "any action that enhances the skills and abilities of workers and, thereby, labor productivity. That is, in economic essence, these are costs that contribute to productivity growth, since unit costs are carried out with the expectation that these costs will be many times offset by a growing income stream in the future "[3]. This approach, in our opinion, is rather narrow and determines exclusively the corporate essence of investment in human capital.

Scientists V. Lysak and V. Semendyak adhere to the positions that characterize investments in the context of each individual carrier of human capital. They refer to investments in human capital as any measures taken to increase labor productivity, namely: "expenses for health care, for obtaining general and special education; costs associated with finding a job, professional training at the enterprise, migration, the birth and upbringing of children, the search for an economically significant message on prices and earnings" [4, p. 550].

Z. Pichkurova understands investment in human capital as "all types of tangible and intangible investments, expressed in monetary or non-monetary form. It has a positive impact on its qualitative and quantitative structure, lead to an increase in the level of income of its carriers, contribute to the growth of labor productivity, increase national income, an increase in the level of economic development of the country and, ultimately - an increase in the level of national competitiveness of the country" [5].

In turn, O. Nosyk in addition to material and financial costs includes the costs of an individual's lifetime and those of his income that he did not receive, spending time, efforts and funds on the formation and accumulation of human capital into the investment in human capital. Therefore, the lost benefits of an individual associated with his activities aimed at the formation and accumulation of human capital are investments in the latter [6].

Therefore, under investment in human capital we will consider resources (material, financial, informational), invested both directly in the development of individual carriers of human potential and in the conditions necessary for the labor development, intellectual, social and other components of capital, the use of which will allow get a certain economic and social effect in the future.

The purpose of the article is to analyze the current state of investment in human capital and substantiate the directions for improving investment support for its development in the context of digital transformations.

3. DISCUSSION

In essence, investments in human capital are investments in intangible assets that accumulate and develop intangible resources for the productive activity of people, namely: knowledge, competencies, experience, health, social skills, intellectual and entrepreneurial abilities. Accordingly, depending on the investment purpose, the following components of human capital distinguish:

– physical capital (health, endurance, physical strength, psychological stability);

– labor capital – a set of professional knowledge, skills and competencies that allow productively and efficiently perform a certain type of work in accordance with the position held;

– cultural capital – linguistic and cultural competences of a person, functioning in the form of a system of values, knowledge and ideas that legitimize status and power and contribute to maintaining the established social order;

– intellectual capital – intellectual abilities, skills and abilities that allow you to form new knowledge, innovative ideas and translate them into an innovative product, technology or service. In the context of the digital economy development, the intellectual capital is the main asset creates competitive advantages and contributes to high-quality transformational transformations;

– entrepreneurial capital is a combination of a person's entrepreneurial abilities (analytical thinking, sociability and communication, organizational skills, etc.) that contribute to the organization of effective production, operational, commercial, social and any other activity.

Each of the listed components (or their specific combination) of human capital can be an object of investment, and their clear definition allows to systematize the criteria for assessing investment returns, possible payback periods and directions of influence on economic processes. In particular, as noted above, one of the most important investment objects in the context of digitalization is precisely the development of intellectual capital, in combination with excellent physical and labor (professional) potential, can significantly accelerate innovation processes and increase the population adaptability level in the face of changes.

An important factor in the formation of an effective investment strategy for the human capital development is the disaggregation of investment entities. Subjects of investment in the human capital development can be divided into 4 levels, each of which has specific motivational characteristics, goals and a corresponding set of sources for attracting investment resources (Fig. 1).

Each of the listed entities contributes to the formation and development of human capital within the available resources and in accordance with the set strategic goals. At the same time, in our opinion, the level of investment activity in the field of financing the human capital development depends primarily on the created conditions that determine the riskiness of these investments and stimulating factors that contribute (or do not contribute) to the choice (all other things being equal) human capital as the investment object. That is, the role of the state, in our opinion, should not be limited exclusively to the distribution of budgetary funds between the main areas of social security and legal regulation of the development and reform of education, health care, culture and sports, social security, as well as create incentives to enhance investment in human capital at all specified levels.

We agree with the opinion of T. Panchyshyn that “The initial task of the state is to create favorable conditions for the disclosure of human potential, its motivation. It is necessary to significantly improve the image of scientists. The state should become an integrator of human potential, gather the best people, improve the training system and advanced personnel training, creating all the necessary conditions for them to achieve their specific goal. Ukraine will be able to establish itself in the development of a globalized world only if there is an appropriate national intelligence, education and science” [7, p. 103].

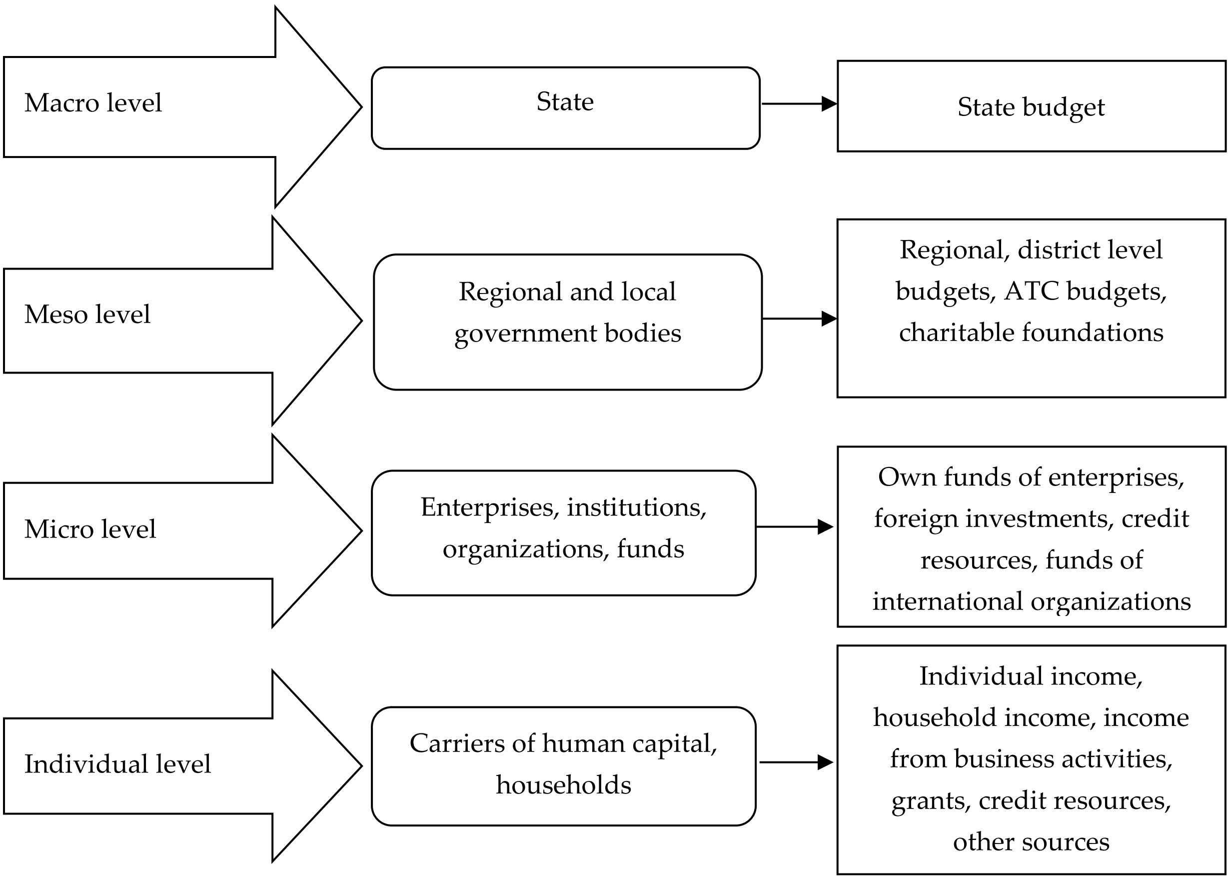

Fig. 1. Model of investment support for human capital development. Source: systematized by the authors.

The main stimulus for the human capital development that affects the formation of a motivational basis at all levels is the purposeful, consistent and pragmatic activity of state authorities aimed at implementing a specific development strategy for the country, ensuring its security and macroeconomic stability. An important condition is also the creation of a regulatory framework that is adapted to the specifics and realities of economic and social transformations in the context of digitalization, the regulation of labor relations, and the preservation of social and investment guarantees.

At the meso level, important motivational factors for the intensification of investment in human capital is the effective implementation of the decentralization reform. According to its results, it is expected an increase in the revenue side of the local budgets and an increase in the powers of local self-government bodies to allocate budget resources in accordance with the problems and strategic needs of the population and the development of territories.

At the micro level, the volume of investment in human capital largely depends on the system of taxation and accounting for personnel costs operating in the country, the availability of state benefits, compensation and legal guarantees for investment protection, state policy for the development of the labor market, etc.

The main incentives for individual investment in the development of one's own potential are clearly defined prospects for its implementation, created conditions for unhindered access to information and technology, a high standard of living, that is, the availability of savings that can be invested in one's own development.

In Ukraine, compared to most developed countries, investment in human capital is not in top priority. The dynamics and structure of financing social expenditures from the state and regional budgets, the structure of household expenditures and the volume of expenditures of enterprises in the corporate sector can this confirm. Table 1 shows the structural and dynamic changes in expenditures from the state budget for the human capital development.

Period	**Health Care**	**Physical and spiritual development**	**Education**	**Social security and social security**	**Total expenditures**
2015	11450,4	6619,2	30185,7	103700,9	576911,4
%	1,9	1,1	5,2	17,9	100
2016	12456,3	4958,9	34825,4	151965,5	684743,4
%	1,2	0,7	5,3	22,19	100
2017	16729,1	7898,1	41140,2	144478,3	839243,7
%	1,99	0,94	4,9	17,2	100
2018	22617,9	10107,1	44323,4	163865,6	985842
%	2,29	1,03	4,5	16,62	100
2019	38561,6	9967	51657,1	218628,6	1072892
%	3,59	0,93	4,81	20,38	100
Growth 2019/2015, %	236,7	50,5	71,1	110,8	85,9
Structural changes, %	1,69	-0,17	-0,39	2,48	0

Tab. 1. Social expenditures from the state budget of Ukraine by functional classification, million UAH. Source: compiled according to the Ministry of Finance of Ukraine [8].

During the period 2015-2019, the volume of expenditures from the state budget increased by 85.9%, which is primarily due to the significant devaluation of the national currency during this period. In the structure of expenditures, in general, it considers as an investment in human capital, the largest share (20.38%) in 2019 spent on social protection and social security, including direct-targeted assistance to the population below the poverty line, subsidizing utilities, covering part of the obligations of the pension fund, and the like. During the research period, the share of this group of expenses increased by 2.48%. Considering the structure of expenditures in the context of human capital development in the context of digitalization, we believe that an increase in the share of social security expenditures in the budget is a negative phenomenon and indicates an increase in poverty among citizens. The received social benefits do not direct to the human capital development; only to maintain vital activity at a minimum level. For effective social security, the state must create conditions for providing citizens with jobs and ensuring a decent level of wages.

Analyzing other items of expenditure, it can be stated that during 2015-2019, the most significant increase in expenditures on health care (+ 236.7%), and their share of total expenditures – by 1.69% compared to 2015. This growth considers as positive, if budgetary resources use effectively.

Expenditures on education in the context of the digital economy development consider by fundamental investments, create the basis for the formation and adaptation of human capital, and, according to the logic of strategic transformations, should grow in the future. The analysis showed that over the past 5 years, despite a slight nominal growth (+ 50%), the share of spending on education tends to decline. This is primarily associated with educational reform, with the aim of optimizing the number of educational institutions and reengineering curricula, thereby contributing to a reduction in the number of employees in the industry and other costs. In our opinion, in the modern conditions of the digital technologies development, reforms in education are necessary to adapt the knowledge obtained in educational institutions with the main trends in science and technology, culture and other areas. However, the cost reduction does not allow for qualitative transformations, since funding, first, for the development of the material and technical base in schools is being reduced, the number of paid services is growing, and the number of teachers, hours allocated for classes, the volume of materials provided, etc. The reduction in the volume of budgetary funding for higher and secondary technical education is a negative trend, since it limits access to knowledge and obtaining qualifications required in the digital environment for a significant part of graduates.

The structure and dynamics of spending on education indicates that the state, despite the introduction of certain reforms in the educational sphere, continues to consider education as an element of social policy and not as an investment in human capital.

Reducing the cost of spiritual development and culture, as well as insufficiently efficient allocation of these resources also creates obstacles for the effective development of human potential.

Analyzing social spending at the local and regional budgets level it should note that its share is higher than at the central level by an average of 3-8%, depending on the direction of financing. This is primarily due to the gradual implementation of the decentralization reform, according to which part of the financial authority to invest in human capital, including education and medicine, transfer to lower levels in accordance with the principle of subsidiarity.

The team of authors identified "the government's priority task now is to improve the administration system of public investments in the direction of increasing the efficiency of capital investments and their use in accordance with the priority areas of the state strategic development. This may ensure the rational use of earmarked funds, reduce bureaucratic barriers that hinder the implementation of projects, increase the transparency of procedures selection of investment projects and prevention of corruption. These measures will create an additional basis for the effective development of national investment potential" [11].

4. CONCLUSIONS

Thus, research of the human capital main trends and investment directions in Ukraine showed that it is precisely the prevalence of a passive investment strategy for the human capital development, in which the volumes and directions of investment were determined mainly on the basis of a past trends comparison and the financial capabilities of the state regarding the coverage of social costs. Its weak connection with the strategic objectives of the structural restructuring of the national economy in the context of the digital technologies development led to a decrease in the level of human potential and an increase in structural, regional, professional and social imbalances.

An important factor in the human capital development is the stimulation of investment in education from the private sector. It requires the development of effective mechanisms for financial cooperation between the corporate sector and higher education institutions, the creation of appropriate programs to encourage business. This should include the following: tax incentives, the possibility of joint formation of educational programs for students of certain specialties or selective financing by private enterprises of additional programs (for instance, language courses, programming), provision of government guarantees for investment in education, etc. The formation of a private market for digital education, licensing simplification of such institutions and activation of public-private and municipal-private partnership projects in this area will also contribute to improving the investment climate.

References

[1] Krayevs'kyy V.M. Investment in human capital - a prerequisite for economic growth of the country. *Investytsiyi: praktyka ta dosvid,* **5** (2011), 7–9. (in Ukrainian)

[2] Giselo O.I. Investment in Human Capital as a Condition for Social Development of Ukraine. *Labor market and employment,* **1** (2015), 11–14. (in Ukrainian)

[3] Makkonnell K.R., Bryu S.L. *Economics: principles, problems and politics*. INFRA-M, Moscow, 2009.

[4] Lysak V.Yu., Semendyak V.M. Human capital development: however, problems and prospects. *Global and national economic problems,* **1** (2018), 548–552. (in Ukrainian)

[5] Pichkurova Z. Investments in human capital as a determining factor in ensuring the competitiveness of the national economy. *Formation of market relations in Ukraine,* **6** (157) (2014), 229–233. (in Ukrainian)

[6] Nosyk O. Investments in human capital: the main peculiarities and factors of choice. *Economic Theory and Law,* **1** (20) (2015), 120–129. (in Ukrainian)

[7] Panchyshyn T. Investing in human capital – the key to modernizing Ukraine's economy. *Scientific Bulletin of Uzhhorod University. Series "Economics",***1** (49) (2017), 99–104. (in Ukrainian)

[8] *Official website of the Ministry of Finance of Ukraine: Expenditures of the state budget of Ukraine*. Available at: https://index.minfin.com.ua. (in Ukrainian)

[9] Irtyshcheva I., Kramarenko I., Shults S., Boiko Ye., Blishchuk K., Hryshyna N., Popadynets N., Dubynska I., Ishchenko O., Krapyvina D. Building favorable investment climate for economic development. *Accounting,* **6** (5) (2020), 773–780.

[10] Irtyshcheva I., Kramarenko I., Shults S., Stegney M., Blishchuk K., Boiko Ye., Popadynetsc N., Samotiy N., Rogatina L., Hryshyna N. An economic management system for sustainable development in black sea region. *Accounting,* **6** (4) (2020), 387–394.

[11] Kramarenko I., Irtyshcheva I., Senkevich O., Topchiy O., Voit D. Structural-dynamic characteristics of investment resources of the regions. *Efektyvna ekonomika,* **3** (2020). Available at: http://www.economy.nayka.com.ua/pdf/3_2020/82.pdf (in Ukrainian)

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Іртищева Інна, Трушлякова Антоніана. Удосконалення інвестиційного забезпечення розвитку людського капіталу в умовах цифрових трансформацій. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 89–96.

Досліджено особливості інвестування у розвиток людського капіталу в Україні на державному, регіональному рівні, у приватному секторі та на рівні домогосподарств. Зазначено, що основним інвестором процесів формування та розвитку людського капіталу виступає держава, що фінансує основні витрати у сфері освіти, медицини, культурного і фізичного розвитку та соціального забезпечення. Проте, державна політика в умовах обмеженості фінансових ресурсів та їх нераціонального використання не сприяє ефективному розвитку та відтворенню людського потенціалу у відповідності до потреб цифрової економіки. Попри номінальне збільшення соціальних витрат, їх структура є нераціональною, а самі витрати не розглядаються у якості інвестицій. Недостатній рівень інвестиційної активності у сфері інвестицій у людський капітал спостерігається також на корпоративному та індивідуальному рівнях. Визначено, що основним стимулом розвитку людського капіталу, що впливає на формування мотиваційного базису всіх рівнів є цілеспрямована, послідовна та прагматична діяльність держаних органів влади, спрямована на реалізацію визначеної стратегії розвитку країни, забезпечення її безпеки та макроекономічної стабільності. Важливою умовою є також створення нормативно-правової бази, що адаптована до особливостей та реалій економічних і соціальних трансформацій в умовах діджиталізації, унормування трудових відносин, збереження соціальних та інвестиційних гарантій. Для урегулювання та активізації інвестиційної діяльності запропоновано модель інвестиційного забезпечення розвитку людського капіталу, що передбачає перерозподіл інвестиційних ресурсів у відповідності до суб'єктів інвестування та очікуваних результатів інвестиційного процесу, форм і критеріїв оцінки окремих складових людського капіталу на різних етапах життєвого циклу, що в сукупності формують загальну модель фінансування його розвитку і відтворення на всіх рівнях.

Ключові слова: інвестиції, інвестиційне забезпечення, людський капітал, цифрова трансформація, діджиталізація.

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LOGISTICAL OUTSOURCING AS AN EFFECTIVE ENTERPRISE ACTIVITY MECHANISM RISING

OLEG TKACH, LIUBOV HRYNIV, HALYNA MYKHAILIV

Abstract. The purpose of the article is to substantiate logistics outsourcing as an effective mechanism for improving the efficiency of the enterprise.

The authors summarize the arguments and counterarguments in the scientific discussion on logistics outsourcing as one of the best methods of optimizing resources in the activity of enterprises, one of the important factors of modern business. Systematization of the results of the research of scientific sources made it possible to identify the problems of outsourcing use in various spheres of activity of economic entities. Systematization of studies of aspects of enterprise management based on logistic approaches has allowed formulating the statement that special value all over the world in logistics is devoted to outsourcing. For many years there is a tendency in this area to transfer a part or all of the logistics functions to specialized companies and outsourcing of logistics services is used by the vast majority of enterprises. Because, as higher the level of consumption in the country, there is more need to involve in the supply chain the goods of qualified logistics operators and transfer part of their operations to logistics outsourcing.

The authors estimate the logistic outsourcing of the enterprise of PE “VEGA LTD” for the method of Yu. Zhelinskiy, which combines the change of income and expenses of the enterprise. Based on the calculations, it is proved that outsourcing for PE “VEGA LTD” is profitable. Therefore, it is advisable to use outsourced services not only for transport logistics but also for other logistic activities of the enterprise.

In the process of investigating the problems of logistics outsourcing and its impact on the efficiency of foreign economic activity of the company, the authors proved that outsourcing in logistics is one of the most modern business models. The use of this approach makes it possible to achieve significant competitive advantages in the activity of the enterprise. The main motives that drive outsourcing of logistics functions are the desire to make the business manageable, reduce transaction costs while obtaining quality service and profit. The results of the study are of practical importance and may be useful to scholars interested in the study of logistical outsourcing, as well as to the enterprises where outsourcing is most commonly used.

Keywords: logistic outsourcing, types of outsourcing in logistics, logistics providers, operators, forms of cooperation of enterprises, logistics services.

JEL Classification: D24, E23, F15, M21, M31.

1. Introduction

Competition aggravation and intensification in the different business processes, new information technologies development and its universal using in all types of life and business activity, transaction speeding up, life cycling obsolescence and abbreviation, consumers' demands and strictness rising have made the Companies look over their strategies of business acts. These challenges caused qualified firms attraction that some part of its own business functions including logistics were passed on.

Logistics outsourcing has taken a place in a practice of the many Companies independently from the scale and type of activity that had taken the attention of the researches.

Today, the logistics outsourcing market is being under development wave because the quantity of the new Companies have been founding and some percentage of them are looking for a qualified specialist which could logistics functions manage outside of the Company.

2. Theoretical Background

The terms and conditions of logistics outsourcing were widely described in the Western scientists works such as P. Bagchi & H. Virum, J. Langley [1], B. Sahay & R. Mohan [2]. By these authors a content was opened and scientific-theoretic issues summarized for all types of logistics outsourcing implementation as an effective enterprise activity mechanism.

One of the popular resources optimization methods in the different activity spheres and basic business providing factors is outsourcing.

The problems of outsourcing implementation providing in different types of Enterprise activity were researched by number of local scientists, it was described in the works of the next scientists as M. Dovba [3], V. Krasnoshapka & I. Trohumets [4], O. Tryfonova & N. Trushkina [5].

Outsourcing in logistics has special means all over the world. In this sphere a tendency has been monitored of partial or all the logistics functions transfer to specialized companies and outsourcing of logistics services is used by the enterprise majority.

As high demand in a country, a need arises for goods network organizing involve of qualified logistics operators and transfer to one of the operation parts for logistics outsourcing.

The researches of enterprise management on a base of logistics in Ukraine were concluded by the next scientists: T. Glushenko [6], V. Krasnoshapka & I. Trohumets [4], K. Zavgorodniy [7].

Notwithstanding the number of scientific work concerns about logistics and outsourcing cohesion in the aspect of enhancement of enterprise competition rising and expenses decline in present, innovative development model searching still is actual and one of this model presumes an implementation of logistics outsourcing in enterprise management.

A. Pasichnyk [8], K. Bilovskyi [9], L. Hrytsyna [10], O. Tryfonova & N. Trushkina [5] were involved in the research of transport logistics, logistics outsourcing and its development in the transportation system, a transfer of logistics functions to outsourcing with a term of enterprise management optimization.

Transportation, storage and assembling are the main points that have been transferred to logistics outsourcing in Ukraine. These three logistics activity spheres make 85% of profit to logistics operators.

L. Hryniv [11] states that logistics is a key factor in enterprise management improvement, the transportation flows as a local and international, including Ukrainian transit potential.

H. Mykhailiv [12] researched outsourcing implementation by the local Ukrainian enterprises like a new type of cooperation that will permits to provide economic activity more effective, to release additional resources and direct it for enterprise development and to strengthen the market competition positions.

O. Tkach researched outsourcing as a modern method of different economic subjects cooperation that permits obtaining the mutually beneficial results within a short period and a long period of time.

3. Research Objective, Methodology and Data

The article matter – motivating factors research, outsourcing advantages and disadvantages implementation in Enterprise logistics, and managing decisions using the improving concern of logistics functions passed to outsourcing on.

The research object is logistics activity of Vega Ltd. logistics system.

The subject research is logistics outsourcing as an effective Enterprise activity rising.

In this article, the research had been concluded concern with management decisions effectiveness justification of logistical outsourcing implementation. In the process of logistics outsourcing expediency researches the methods of scientific knowledge of phenomena and processes in economic activity, such as comparative analysis. Within local and foreign scientists work summarizing, historical method (for logical outsourcing means specification and with a purpose for driving forces and problems with logical servicing raising in a modern enterprise activity; formal-logical method and summarizing method (by the types of logistics providers definition and definition of cooperation by PL-provider with a range of services); analyze and synthesis (within the estimation of possible risks from taken decisions concern to outsourcing using); induction and deduction (within a typical model of definition concern implementation of managing decision about logistics outsourcing possibility using by foreign trade activity).

4. Results and Discussion

In the modern changeable, dynamic, compatible terms of the external environment, there are many of the Companies are looking for ways of improving all of the activity spheres. This also concerns its logistics. The basic point of enterprise activity is a delivery network management of the products and information current guarantee along with the whole enterprise delivery network. Thus, they are more concentrated and specialized with a help of outsourcing activity, which is far away from its basic business.

For a bigger number of enterprises, logistics is not a major business competence but logistics needs a lot of resources and attention due to keep the logistics Department (Dpt.) functioning. Use to be an own logistics Dpt. – does not mean a high level of logistics servicing and low level of logistics expenses. In addition, hired managers demand wages constantly raising up that do not confirm desired results and manager competencies. As a result, sometimes more profitable is to pass logistics outsourcing out.

Outsourcing in logistics activity means passing this activity out to a third provider, as a logistics servicing supplier. As an outsourcer can be a separate enterprise or several Companies, thanks to them, it is possible to decline the expenses to logistics.

With time passing by some enterprises came to the conclusion that without the cooperation of the knowledgeable logistics specialists to improve the business process in this sphere is practically unreal. Once the logistics were developed by the enterprise has invested money into the workers, the warehouses, and so on, but with a time they came to the conclusion that logistics outsourcing is a more optimal way for expenses decline. Outsourcing of logistics activity makes effectiveness rising from 9% to 15% capacity and quality rising [13].

The enterprises in logistics use to take one of the two alternatives – either to provide logistics functions by them or pass it out. The number of enterprises does not pass logistics services out concern for some reason. They establish their own Dpt. It is usually happens in enterprises where for the owner is important to keep the logistics schemes as unique.

Due to define the mean of logistics outsourcing some samples had been invented in the literature. For example, Sink and Langley (1997) and Millen et al (1997) says, that logistics outsourcing is an external supplier using for conducting some or all logistics services of the firm which are provided by the firm. Those definitions are being kept by [14], which added that logistics outsourcing is getting more force tendency in the modern enterprise because of the number of priorities are brought by. In the presented research all different propulsions and problems have been estimated with a connection of logistics servicing rising.

Outsourcing is one of the successful business models which include passing non-basic functions enterprise out and all the connected activities to outsourcer management.

With the connection of several profiles of this point such as logistics outsourcing (outsourcing of logistics decision) is vied from the following theories:

1. Resources bound theory.
2. Network theory.
3. Transaction cost economy.

1. Resources bound theory (RBT).

RBT looks at the Company like resources totality which spread heterogeneous [5]. Hereby, the meaning of logistics is defined as management optimization by the material and related its information and financial flows. Term "resources" concerns not only material resources such as warehouses, equipment, and factories but also non-material actives such as knowledge, know-how and organizational activities. According to this theory, the Company needs to ensure the right type of resources effective flow from its surrounding with the purpose of survival on the market, competition rising and stability [4].

Logistics servicing transfer to outsourcing permits the Company to get access to a wide not owned resources spectrum, to the keep competition on the market, and to obtain access to additional resources. By the way, the fact of the additional resources access does not explain the reason fully why the Companies transfer their own logistics services to the suppliers of logistics that takes to Network Theory (NT).

2. Network Theory (NT).

The effectiveness of logistics activity is defined by component elements synergies effect of the right established logistics network, logistics system and also system cooperation. The theory NT stipulates that outsourcing permits the Company to manage the supply network as a whole through relations forming and network coordination. Thus, a need is occurred by the resources exchange between of the Companies [15]. This theory points out that thanks to system establishing, links creation, and cooperation between Companies, they can obtain necessary (and absent) resources. Attention concentrates on alliance forming between the Companies.

3. Transaction cost economy.

From the point of economy cost transaction theory, view the Companies logistics servicing transfer was based on a sum of transaction minimization and production expenses. This theory is based on a point that supplier logistics servicing outsourcing is to be happened when there was a possibility to decline transactional expenses.

Stipulated principles are explained [8] and noticed that in a case of low transactional expenses the Company will face to outsourcer service, if these expenses will be high the Company will provide this activity by itself.

Hereby, this theory does not explain all the logistics processes and the connected decisions with it.

Basically, the reasons that make the functions transfer to outsourcing are the following:

– own resources absent;
– limitation expenses needs;
– basic types of activity concentrated necessity;
– competitive advantages in obtaining desire.

Necessary to recall the next two reasons:

a) Company management does not know how to act:
   – there is not a future perspective of further development of a present activity direction;
   – the Company is starting to lose its own market advantage;

b) Management of the Company is not able to formulate an exit from a current situation.

On a whole, outsourcing is effective by following terms:

– is worked out process with a history of successful and profitable contracts;
– gives a chance to obtain improvements which are not achievable by any of the departments;
– improves a Company activity and defined process;
– proposes expenses surveillance which is not possible by internal Dpt. acts;
– unpredictable expenses limiting;
– servicing quality improvement;
– permits to be a competitiveness;
– gives a possibility to concentrate on the basic types of activity and the sources of profit;
– is an effective method of corporative culture changes;
– proposes not reachable by inner Dpt. quality level;
– foreseen a flexible attitude to workers quantity;
– gives an opportunity to improve their own knowledge.

Very often mean of "outsourcing" is used in the context of problem-solving "to produce" or "to buy" [16]. But today the mean of outsourcing coming out from its common means – as a method business providing when second types of Company activity are passed on to the external organization. This organization is able to use all given resources by the interests of the Company's customer.

The present experience testifies that outsourcing implementation has a reason in the following cases:

– need has occurred as for labor and material resources;
– activity of the Company in different directions is not connected with each other;
– job accomplishment requires to use experience and professional knowledge;
– company activity is undone survival of different market fluctuation that led to high expenses for stuff education;
– technology is changing so fast, that demands big investments.

In addition, outsourcing is considerable expenses control. Its realization ensures:

– more serious expenses transparency for business management and its process;
– service-provider involves the own stuff for the project's realization as necessary;
– cooperation of organization with service-provider ensures expenses decline which is used for infrastructure and tools etc.

The specialists use to separate some type of outsourcing as following:

– business-process outsourcing: foresees the delegation of the task that is not a concern to a main type of work for implementation by another Company;
– productive outsourcing: for an instant, new product creation with implementation by another Enterprise service;
– IT outsourcing;
– bookkeeping outsourcing;
– out staffing; submitting the stuff for a period to some separated tasks providing.

Commonly, outsourcing is used for entrepreneur's support and development. These are:

– scientific research and analytical work organization according to Company points;
– entrepreneurial education;
– infrastructure organization development program had been invented for small and medium business support;
– inventing practical manuals and training materials by special directions.

Due to the stipulated work algorithm, a Contract between Company - Customer and outsourcing Agency has been accomplished where the following information is mentioned:

1. Names, addresses of the Parties; terms of the Contract; description of the Customer acts are transferred to management by accepting Party.
2. Management manual, rights, and obligations are confirmed for each manager.
3. All types of characteristics are to be passed on to the responsibility of the Supplier according to the Contract including Dpt's are to be left in the client organization.
4. Contract terms for validation and termination.

5. Negotiations terms concern the Contract prolongation.

6. Risks/profit distribution terms.

7. Problems solving terms which could arise under the acts of external (force majeure) acts, for instance, low change and the ways of influence toward Contract implementation.

8. All payments and compensations characteristics belong to the service supplier and Client.

Outsourcing is a new progressive activity management organization which that ensures the not related to basic production functions transfer to the specialized Companies with qualified staff (8).

Local Enterprises outsourcing implementation is:

– a new type of production which permits the Enterprises to provide economic activity more effectively, to release additional resources and direct it for Enterprise development and make the strongest competitive position on a market;

– the point of economic effectiveness outsourcing implementation improvement needs to be further developed including Ukrainian law system development in these directions and also the mechanism of outsourcing supplier reliability settlement.

Outsourcing is at the beginning level in Ukraine and gives a possibility to use it as a base for system management improving the number of the Enterprises which have not been providing a similar experience.

We think that logistics is more perspective sphere that is enriched by progressive and aimed to oriented professionals who are ready to adapt to new management instruments implementation and to risk with a matter of strategic targets achievement.

Outsourcing is a modern type of different economic subject cooperation that gives a possibility to obtain positive mutual results within a short time and long periods. In the developed countries and Ukraine so this cooperation has rising the chances and perspectives of high economic development. By this, is important to define for any of the Contract and terms outsourcing which means optimal type.

In Europe the value of logistics functions are transferred to outsourcing Companies such as 61% transportation service; 35% - warehouses; 25% - information system; 15% - revers logistics; 13% - fleet management; 11% - costs minimization; 8% - supplier management; 6% - order scheduler sheets; 5% customers support.

The main obstacle for outsourcing development in Ukraine is the lowest state support, the impossibility for effective control for an outsourcing provider, and its economic status. One of a drawback is partnership relations which happened could be unreliable.

Also, the obstacle in the process of logistics outsourcing can be logistics infrastructure absence. Logistics infrastructure development gives to the Western Countries not only to ensure their own needs by transport - logistics servicing but also gives them to other Countries. Ukrainian transit potential is used only for 60%. The income from the transit and coherent servicing complex is 6% GIP. Because ineffective use of Ukrainian potential occur that the Country did not receive 2.5 mln. usd. [11].

In addition, outsourcing progression state support is pretty important in modern economic conditions [1]. For example, India and Ireland are the world leaders in the outsourcing market thanks to State support and state structures of development. Despite the obstacles on the outsourcing development way in Ukraine, there are some advantages which support the outsourcing operations providing, thus low wages compare with Europe and the USA, a high unemployment rate of qualified staff; ability to communicate in foreign languages.

Outsourcing is an influential factor concern with Companies effective operations. It is the main element for expenses reduction. Also outsourcing influences concern to enterprise's competitive position.

Priorities and disadvantages of outsourcing are stipulated concern to economic activity [10].

The common advantage of logistics outsourcing includes the following points:

– risks clear distribution;
– business-process and ways of its effectiveness rising;
– expenses quantity shorting thanks to staff quantity reduction.

These are management advantages of logistics outsourcing:

– management control improving capability;

– growing potential definition possibility and all the possible obstacles cancelation;

– perspective to locate attention and necessary resources on the main activity like a customer demands and company targets concern to the technical-technological advantages necessaries;

– high-level mission accomplishment access and necessary technology using;

– reliable servicing and quality rising.

Due to implement logistics outsourcing in Ukraine is necessary to avoid the obstacles that cause its unfavorable development.

These obstacles can be: uncertainty concern to Company secrets announcing by involved stuff, uncertainty concerns stuff professionally. Thus, the managers are not able to trust to other Companies do not take into consideration that these Companies thanks to narrow specialization are supported by the qualified staff which has been cooperating with many other Companies and implements their experience in the different spheres of activity.

In a case of an implemented decision by the Board of Directors is necessary to understand how will tide the Company up with the future Partner. It means what kind of cooperation the Company has been looking for: for hierarchical or market-oriented.

By hierarchical cooperation very tide interdependence is aroused, in practice it means cooperation between main and daughter Companies.

In the case of mutual work organized by the type of external partnership it's being qualified as a market-oriented.

Very important is the fact for what period these links are established: long term or short term or it can be made for once.

It is necessary to consider: as much number of the Enterprises are to be involved in cooperation [6]. Additionally, in the case of long-term cooperation to conceal the Contract is more difficult. It can be possible only in the case of big expenses costs.

Necessary to consider, the decision about outsourcing cooperation is big influence on enterprise structure. That is important to be prepared properly and estimate all advantages and risks properly.

In this cooperation, the Contract forms are very important because in case of nonfulfillment obligations the Parties will require losses compensation [17].

All expenses are aroused within some business-project conducting control could be estimated only approximately and this is a big drawback. The quality problems can be regulated basically by a number of acts implementing toward quality management for example logistics data.

Some instruments are to be involved for the expenses analyzing due to display the separate expenses for each provided decision and evaluate it.

Logistics providers – enterprises make logistics servicing complex. Different providers are different by technological level and servicing range [18].

The first level logistics includes internal logistics where all transportation, storage service, and other operations are to be concentrated inside of the organization – Customer. 1PL-providers are not logistics intermediary, because all functions are to be made by cargo owner (Fig. 1).

Second level logistics are external (2PL) and make ordinary servicing range which links to transportation and storage. 2PL-providers are logistics intermediaries.

For above mentioned could be transportation Companies; custom brokers; expeditors; custom warehouses; temporary storagy; agents; warehouses complexes and cargo terminals.

2PL providers have a narrow specialization but nevertheless, they have checked database and work experience in some spheres. Second level providers work on the local or regional markets.

Third level logistics (3PL) are external logistics that cooperates to all logistics services into one complex and includes additional services such as cargo storage, invention and design of different information systems with a helper using servicing.

3PL-provider is commonly called an intermediary which gives the logistics services complex to the customer. This type of Enterprises takes into own control some or all logistics functions. These logistics intermediaries commonly work within interregional areas on the bases of long terms Contracts.

Fourth level logistics (4PL) cooperate by external and internal logistics. 4PL providers main difference from 3PL system attitude implementation toward all customer logistics process management. These logistics providers work on the world market in terms of strategic partnership.

Fifth logistics level (5PL) – internet logistics. 5PL provider submits the whole complex of the service for an account of world network using. This is a vertical partner: from one side he has all information about the network member's capabilities, from another – IT product which gives a possibility to create the optimal network inside of the logistics systems.

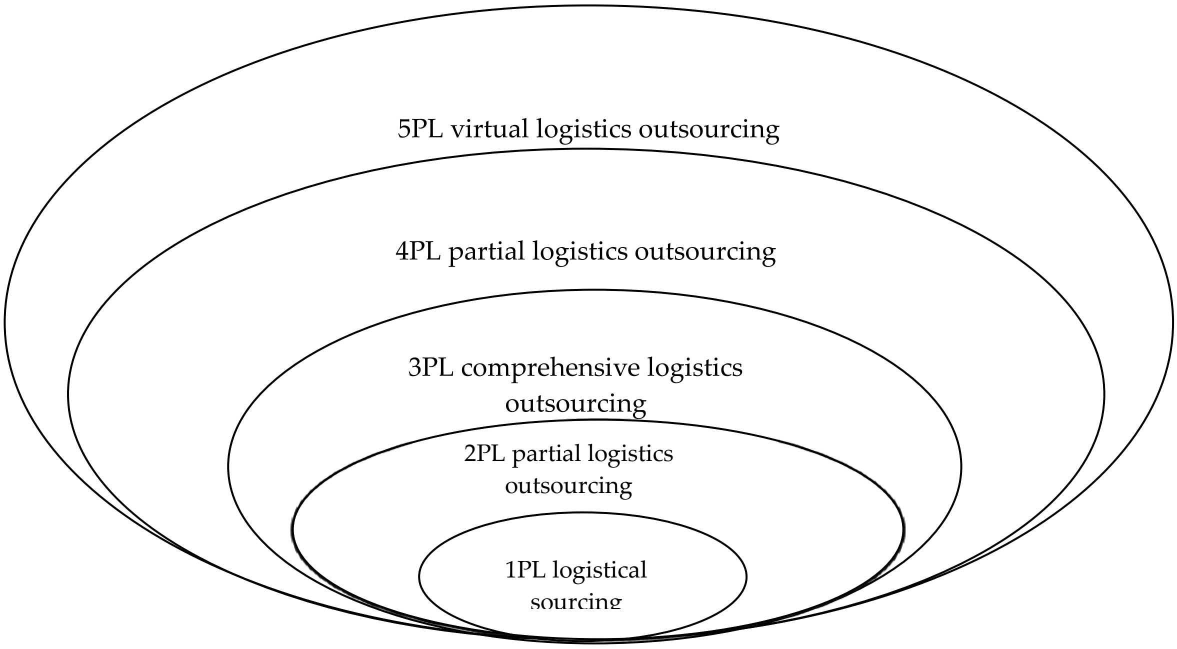

Fig. 1. Interconnection of the PL-providers with services range. Source: [19].

Logistics services suppliers' differentiation is made based on a partner's qualification definition of the separate sector and all different types of aroused situation. At the beginning of the cooperation stage the logistics services supplier is being held as the subcontractors, in an innovative attitude in a process of cooperation they look like "co-authors" and "designers" or "managers" of the delivered network. In the figure 2 the characteristic of the main logistics services basic supplier were presented.

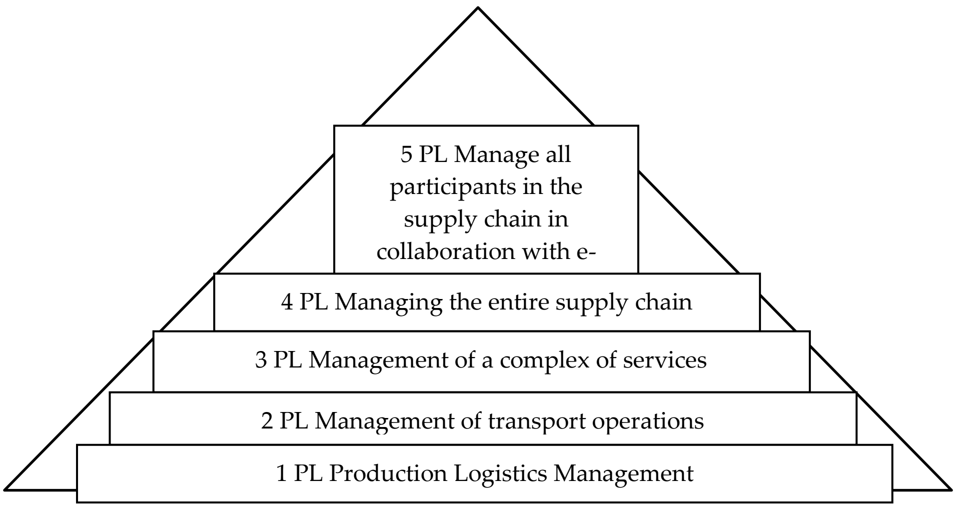

Fig. 2. Logistics services type's supplier characteristics. Source: developed by the authors.

Having being existing scientific theses analyzed the researches testify that main attention is made toward the Companies consume the logistics services, but not big attention are to be paid to outsourcers are providing these services. Logistics effectiveness and Enterprise effective activities are defined by a term of effective cooperation by all the processes parties.

Foreign trade activity foresees the Enterprise activity out of the native country, which has been accompanied by the risk and uncertainty rising. These are defined for foreign market logistics outsourcing using.

In the case the Enterprise has trade-economic connections with the foreign trade suppliers or has a plan to come out to the foreign markets with own product the necessity has been aroused for looking out to a staff are able to provide the above processes. In case of Enterprise strategic orientation to foreign markets is necessary for own Dpt. establishing with the international specialists in it. But in case, when the necessity of foreign trade activity is aroused only sometimes, to keep working this Dpt. is unjustified expensive. The best way to dissolve this problem is foreign trade outsourcing.

Foreign trade outsourcing has foreseen organizational and technical processes transfer connected with imported goods buying and export sale to aside Company – outsourcer. This method priority is additional recourses release of the Company (financial, labor, timing) which can be directed to production and business. In nature, logistics outsourcing means to authorization specialized aside Company all the type of works connected with foreign trade activity.

Outsourcing advantages by foreign trade activity:

1. A better understanding of the market and consumers market features (tastes and consumers preferences).
2. Expenses shortage for Company establishing, office opening and wages, taxes payments.
3. Wide range receiving of the logistics services.
4. Products sale rising and sale Enterprise foundation as a result.
5. Deduction (nonpayment) of some foreign currency payments, customs procedures.

Logistics servicing providing by foreign trade activity:

– foreign supplier selection and commodity buying;
– paperwork;
– commodity storage organization with a complex of satellite services;
– balance keeps checking in real-time;
– foreseen and readiness for demand growing;
– commodity moving control by WMS online system;
– transportation logistics and commodity insurance by foreign trade operations are to be made by outsourcers;
– foreign contracts preparing and management;
– customer and brokers servicing;
– export and import permission preparing;
– commodity certification;
– most trading effective scheme selection;
– work with regulated bodies;
– foreign currency regulation;
– VAT payments and other types of payment.

Custom clearance needs professional and experienced staff. This complex permits the invention of the best version of delivery organization and custom clearance.

Thus, logistics outsourcing permits the Company to minimize expenses, raise a work effectiveness concern to foreign partner searching, to speed the process up thanks to transportation points solving by the complex. Taking into consideration the validity and difficulty of this point, taking management decision concern outsourcing implementation into enterprise foreign trade activity needs to be carefully weighed and justified. This management decision implementation process is made in the terms of uncertainty. It makes the process more difficult and reduces the effectiveness of the accepted decision

[20]. Within a need stipulation by logistics outsourcing a model decision making is proposed about logistics outsourcing implementation by foreign trade activity providing (Fig. 3).

According to Figure 2 this decision-making process has to be made in two stages – preparatory and basic. On the preparatory the tasks are to be defined including foreign trade activity development; enterprise expenses optimization thanks to logistics outsourcing implementation, additional outcome receiving, and foreign partners searching. All these tasks can be solved successfully by outsourcing implementation.

On the stage of existing enterprise advantages is necessary to define logistics functions, and activities ranges which can be passed into outsourcing out, besides this concern to transportation logistics, foreign partners searching and custom clearance. These functions transfer can be full (all enterprise logistics functions passing out into outsourcing) or partial (only some functions, for example, transportation logistics).

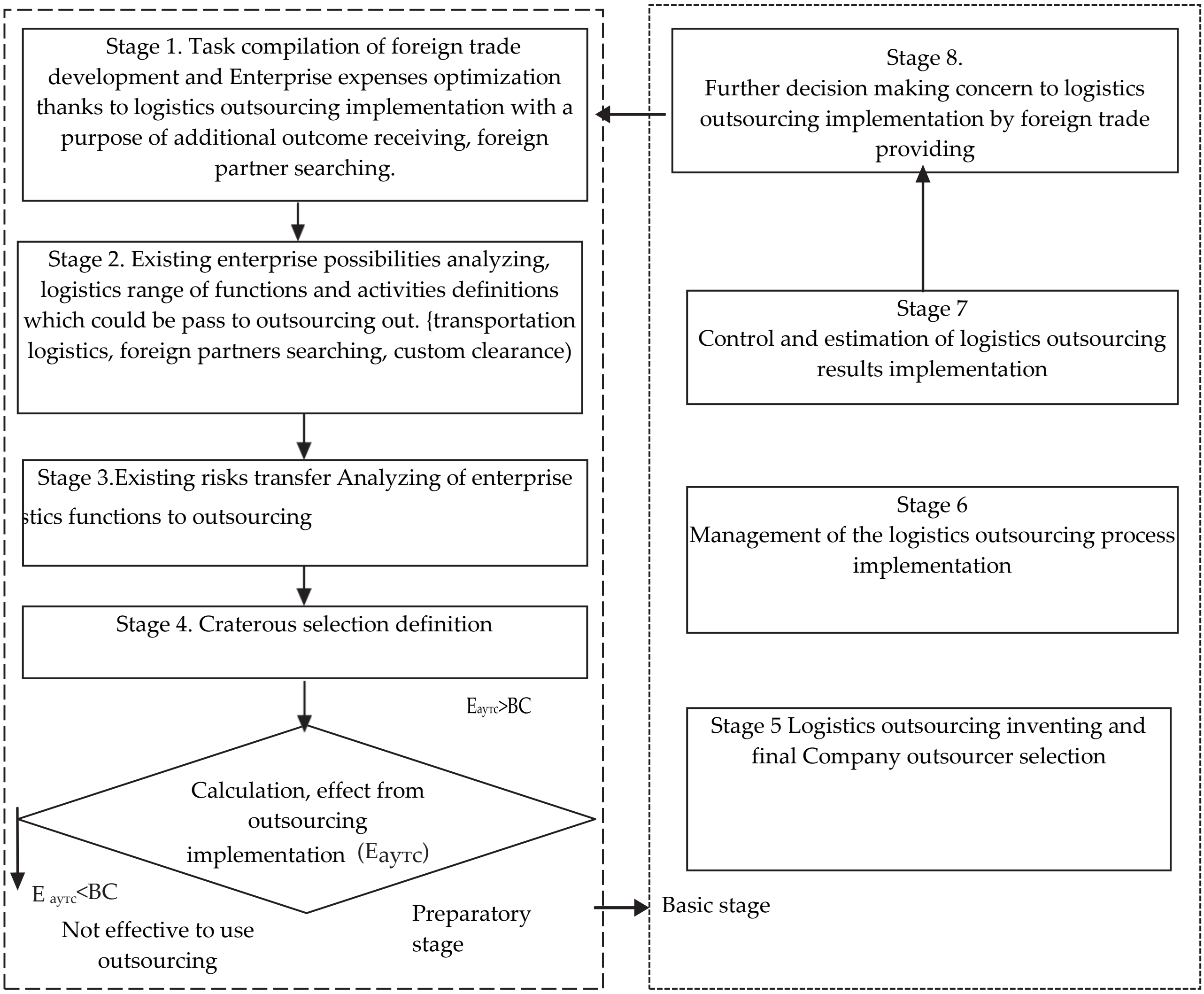

Fig. 3. Management decision making concerns to logistics outsourcing implementation possibility by foreign trade enterprise activity. Source: designed by the authors on the base of [21].

The next stage requires a perfect estimation of possible risks from decision-making concerns to outsourcing using and also from its economic validity. Within these instruments can be used Mc. Kinsey model: "Price watehouse Coopers" methodology, BCG model (proposed by Derting), Khlebnikov outsourcing matrix, Y. Mitrophanov proposed matrix, M. Tatjanok Methodology, Y. Zhelinskyj methodology.

Name of methodology author	Characteristic	The parameters that the technique takes into account
Mc. Kinsey model	Outsourcing is to made on the basis of: 1. Export evaluation of involvement to technological network for consumer's value creation. 2. Profitability of non-profile activities from the view of the clear expenses and Enterprise outcome contribution. Thus, business process separation according to the reasons: "profitability" and technological process involvement". This methodology gives a possibility to reveal non-profile and unprofitable process and Dpt.	Displays two criteria's: non-profile actives involvement to technological network concerns to consumer value creation
Price waterhouse Coopers (20)	Matrix has two factors: active importance and active strategic importance. Options of these facts combinations in the matrix give four options of a solution. Combination of a low strategic importance and competition actives importance transfers the Dpt. functions factors to an aside organization	Analyze had been made based on comparison parameters – "active compatible importance" and "strategic importance of Dpt. for Enterprise and separates four types of decision making
BCG outsourcing matrix	Permits to provide business processes separation expediency outsourcing analyzing according to the following elements – strategic influence; financial influence, business – influence; business - risks	Analyzing is to be provided based on five elements: financial elements; strategic influence; business – influence, business – risks
D. Khlebnikova	Two factors instruments analyzing: the analysis is to be made by two basic factors: "strategic importance" and "competencies quality compare with competitors and market totally" which are estimated by three levels. This matrix of outsourcing is a method of object review separation to 3x3 matrix segments, by which can be a separate proceedings Dpt., type of work toward to a separated specialist, the carrier of a competence. This method is to be differenced by estimation criteria scale. In the case of data separation by the matrix field the variants are to be produced of decisions making.	In the two measurements matrix were given: strategic importance, competencies quality /works/, the results compare with existed on the market. Strategic importance has its own components: technological involvement which considers some type of Enterprise activity: profitability factors; owner intentions; social – economic and political aspects of possession. Outsourcing matrix horizontal scale is – competencies quality/works/ results compare with existed on the market. Due to estimation, the matrix is necessary: To understand that the Company makes the goods are buying; To know which competency confirms the business and to answer a key question: why makes it important to analyze real stuff competencies; To analyze competitive environment; On the infrastructure analyzing base to define market terms; To give a possibility to make a transformation
UBS (21)	Business functions separation on the decision to outsourcing is to be made with a decision-making matrix invented by IBS consulters. By axis X the matrix is made service value relation inside of the Enterprise to the value of the same value on the market; by axis Y – business-functions quality characteristics compare with the market. By this result, the matrix is being divided into nine	Outsourcing matter is to be considered by four important aspects: Strategic priorities economical effectiveness; Services management transferred to outsourcing; Reliability and risks

Name of methodology author	Characteristic	The parameters that the technique takes into account
	segments, each of the segment confirms one from the fourth conclusions: Outsourcing implementation – Refusal from the own Dpt. and buying the same goods on the market; – Development – improvement of business functions for the quality raising services or cost reducing; – Development or outsourcing – two decisions are possible (advantages depend from Enterprise policy to considered business-functions separation – business function is compatible and can be separated in different business for profit receiving.	
Zhelinskogo methodology	Outsourcing effectiveness is the sum of outcome and expenses in a separate sphere of activity. The changes could be positive and negative but sum of the needs is to be more than 0. The difference between total incomes and expenses after outsourcing implementation needs to be bigger than the difference in the profits and expenses	Enterprise profits and expenses analyzing

Tab. 1. Compatible characteristic methodology of evaluation management decision making concerns to logistics outsourcing. Source: formed by the authors.

The methodology method permits to make estimation by the parameters complex. It does not consider the human being factor within transferring of the own Company management functions to the management by aside Enterprise.

The risks (the disadvantages) of logistics outsourcing implementation are to be arisen by the following cases:

– big value of the expenses rising with a connection of a process and the functions to outsourcing;

– big value of expenses are used with the purpose of survival cooperation with the suppliers which supply outsourcing services;

– non foreseen ability of outsourcing Company bankruptcy;

– professional ability improving the another Enterprise than own stuff;

– limitation of logistics outsourcing juridical regulation definition.

By definition of logistics, outsourcing effectiveness is necessary to consider the alternative value that is the possibility of released finance using for another Company activity. It is advisable to use the only partial transfer (some separate logistics functions) to logistics and to raise the activity in the future by a term of effective cooperation. Besides, on all levels of outsourcing implementation in logistics is necessary to use a comprehensive control and results in evaluation of logistics outsourcing implementation.

The most important factor by Enterprise logistics system outsourcing is the effective organization of economic activity.

According to management decision making invented model concerns logistics outsourcing implementation by enterprise activity calculates outsourcing implementation effectiveness. For this, we used Y. Zhelinstskiy methodology [9].

According to this methodology for outsourcing effectiveness evaluation the sum of incomes and expenses needs to be calculated in the enterprise activity spheres after and before outsourcing implementation. As a result, the difference between total incomes and expenses after outsourcing implementation needs to be more from the difference of incomes and expenses before outsourcing implementation.

Formula is to be developed:

P_1 – total incomes before outsourcing implementation;

V_1 – total expenses before outsourcing implementation;

P_2 – total incomes after outsourcing implementation;

V_2 – total expenses after outsourcing implementation.

Logistics outsourcing evaluation of Vega Ltd. provides with a method where changes of Enterprise incomes and expenses are combined.

This methods group confirms to common attitude for result evaluation based on incomes and expenses changes and is very simple for use.

Private Enterprise Vega Ltd. has been established on May 08, 2008. The main activities consist of: wholesale of wheat and animal feeds, vegetable oil for technical purposes and truck service. 20 workers work on this Enterprise.

The Enterprise sales the products as in the internal market and provides foreign trade activity. Export of the commodities has been providing to Lithuania, Estonia, Poland, Czech Republic, Belorussia and Moldova but not exceeding the products sale on the external market because of tough policy and EU quotas. In EU Countries a biodiesel is produced from vegetable oils and from second raw materials such as a press an animal feeds are made which afterward are coming back to Ukraine as a premixes and a protein – vitamin-mineral supplements.

Additionally, the Enterprise gives a service of trucking of liquid, bulk, cargo and assembled cargos to the countries such as: Austria, Germany, Nederland, Greek, Bulgaria, Romania, Czech Republic, Slovakia, Poland, Latvia, Estonia, Moldova, and Belorussia. The oils, juice concentrates, jams, wheat, wood products, parts of furniture, fire wood and the pallets are exported from Ukraine. The mineral fertilizers, metal sheets, animal feeds are imported into Ukraine.

Among the basic negative factors influences Enterprise work are corruption on a custom, Ukrtranssecurity corruption that connected to Poland and Austria issuing permission; credits involvement with a high rate.

The Enterprise has an intention to make transportation logistics outsourcing with a Polish Company which provides dispatching services, minimizes an empties trucks running that influenced on transportation Dpt. within long period of time and expenses caused. In the future this Enterprise plans to pass goods sales out to a foreign market for outsourcing.

Due to understand a reason and main of transfer some function by Vega Ltd. to outsourcing let's see the following example:

A truck (type DAF and truck tanker) makes move for a route – Chortkiv (Ukraine) – Orkhly (Moldova) – Voljkersdorf (Austria). From Moldova to Austria a juice concentrate is transported.

To calculate an expenses: 24mt. x 110 euro (1 mt. transportation cost) = 2640 hrn. x 26,9 (euro exchange rate)

1. Fuel – 1000 km x 0,38 (consuming with cargo) x 26,9 (exchange rate) = 10222 hrn.

2. Insurance (green card) = 2000 hrn.

3. Permits:

- Moldova (1 pcs.) = 500 hrn.
- Transit via Moldova through Ukraine = 2690 hrn.
- Poland (1 pcs.) = 190 hrn.
- Czech Republic (1 pcs.) = 170 hrn.
- Austria (2 pcs. – entrance/exit) = 610 hrn.

4. Payment a truck transit with ecological secure class not lower than Euro 5.

- Moldova – 0 hrn;
- Poland – 880 km x 0,27 zl. = 338 zl. x 6,357 (exchange rate) = 1513 hrn.
- Czech Republic 340 km. x 3 cor. = 1020 cor. X 1,07 (exchange rate) = 1091 hrn.
- Ausria 202 km. x 0,4 euro = 81 x 26,9 (exchange rate) = 2179 hrn.

5. Driver wage – 71016 x 0,14 (percentage wage) = 9942 hrn.

6. Taxi driving – 1000 km. x 0,22 (fuel consuming without cargo) x 26,9 (exchange rate).

7. Truck amortization for one route – 4810 hrn.

8. Bookkeeping, director's wages, 2 mechanics wage, office manager wage with taxes – 750 hrn. per one route.

Total expenses for the route are 42 588 hrn. Before Enterprise was planning to transfer logistics to outsourcing the truck had been returning to Ukraine without cargo that was making the profit lower and caused the losses sometimes.

Thus, calculate an outcome before transferring logistics to outsourcing:

71016 – 42585 = 28431 hrn. cleaned profit.

The trucks are coming back with the other loads after faced with outsourcing. Let's look at the sample: the truck is backed from Austria and The Czech Republic was loaded by glycerol 24 mt. x 95 euro/mt x 26,9 (exchange rate) = 61 332hrn.

A route Volkerscdorf (Austria) – Znajmo (Czech Republic) – Dybno (Ukraine).

Expenses calculation:

1. Tank cleaning - 140 euro x 26,9 (exchange rate) – 3766 hrn

2. Expenses for the route Volkerscdorf (Austria) - Znajmo (Czech Republic) = 170 x 0,22 (fuel consuming for 100 km without cargo) x 26,9 (exchange rate) = 1006 hrn.

3. Expenses for the rout Znajmo (Czech Republic) - Dybno (Ukraine):

905 km x 0,38 (fuel consuming for 100 km with cargo) x 26,9 (exchange rate) = 9251 hrn.

4. Custom duty for entrance to Ukraine – 620 hrn.

5. Driver wage – 8300 hrn.

6. Tank cleaning 2 – 1600 hrn.

7. One route track amortization 4810 hrn.

8. The wages of bookkeeper, director, two locksmith office manager, mechanic with the taxes – 750 hrn. per one route.

9. According of the logistics outsourcing Contract N1608/18 dd.01.08.18. outsourcer receives 10% of profit from the cargo founded by him without expenses connected to truck taxi to a place of loading.

Thus outsources profit is 61332 – 1006 (gas consuming for the rout Volkerscdorf (Austria) - Znajmo (Czech Republic) – 60326 x 10% - 6033 hrn.

Gross expenses for this route are 30576 hrn.

Cleaned profit for this route is 28431 + 30756 = 59181 hrn.

E = 59187 – 28431 = 30756 hrn.

From above mentioned – the profit is growing after logistics transferring to outsourcing. It means for Vega Ltd. outsourcing is profitable.

Let's make a forecast for Vega Ltd. to 2020 with two variants of development – without transportation logistics transfer to outsourcing (variant 1) and in case of outsourcing Contract implementation to Enterprise transportation logistics (variant 2).

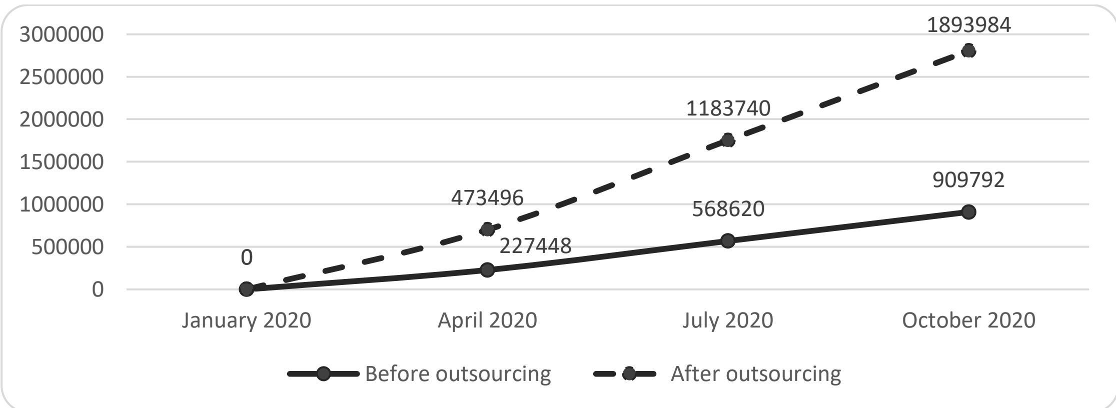

Fig. 4. Profit rising forecast to 2020 without outsourcing and by the logistics transfer to outsourcing, hrn.

Source: formed by the authors.

The truck for one month makes 4 routs. Per one year the truck works 9 months. For this period the truck makes 4 x 9 = 36 routs.

In the case for one route the profit is 59187 than one truck for 36 routs makes 59187 x 36 = 2130732 hrn.

Enterprise transportation logistics effectiveness calculation is submitted in a table 2 with a possibility of any type of development.

Data	Variant 1	Variant 2
Expenses (1 rout)	42585	30756
Cleaned profit (1 rout)	26431	59187
Cleaned profit (a gear)	1023516	2130732

Tab. 2. Two variants of the Enterprise logistics activity data, hrn. Source: formed by the authors.

In winter months with the weather matters, the truck will not be involved for any of the services. The first working month would be – a march. For March and April the truck make routs. Thus, (picture 4):

variant 1 - the Enterprise would get a profit – 26431 x 8 = 227448 hrn.

variant 2 - the Enterprise would makes a profit 59187 x 8 = 473496 hrn.

In the same way Enterprise approximate profit to another months: up to July and October.

July:

- variant 1 26431 x 20 = 568620 hrn.
- variant 2 591187 x 20 = 1183740 hrn.

October:

- variant 1 – 28431 x 32 = 909792 hrn.
- variant 2 – 591187 x 32 = 1893964 hrn.

So, outsourcing is profitable for Vega Ltd. That is why it is a reason to outsources services using not only concern to transportation logistics but for another enterprise activity.

5. CONCLUSIONS

During the research of logistics outsourcing and its influences on foreign trade Enterprise activity the following conclusions were made:

1. In logistics activity, the outsourcing is a modern business - model. This implementation attitude gives a possibility to get the utmost competitive advantages in Enterprise activity. Basic motives caused for logistics functions transfer to outsourcing are: to make business more manageable; to reduce the transaction costs and within this to obtain a profit.

2. Due to define a necessary of second functions transfer to outsourcing is necessary to take into account all positives and negatives sides of this activity.

By the outsourcing process development, the positive and negative factors have been operating as well. But there is a matter that the most important limitation has to be an economic profit and its use. Because there are many cases when to transfer to external management other functions is not reasonable.

Possibility for the Enterprise - Customer to concentrate the trade activity by the own forces within basic directions of business is most advantage of outsourcing, that is only why the Enterprises second functions transfer to other specialized Companies lowering the servicing expenses of business-project; provision of favorable conditions and world class of services, outcome rising, foreign currencies welcoming.

3. For modern Enterprises problem is actual logistics outsourcing implementation. The calculations were made concern to research Enterprise logistics transportation outsourcing effective using present the advantages of these steps.

The foreseen for 2020 year with two tips calculation (with using of outsourcing and without) indicates for the bigger opportunity for profit dynamic of the Enterprise.

4. Thus, a transition to logistics outsourcing – is a strategy that is directed for profit and competitiveness rising by long term period. During outsourcing implementation in Enterprise logistics the Enterprise received a possibility to concentrate the resources within profiled business and do not be involved in establishing and supporting of an infrastructure unconnected with it.

5. At present, within a transfer of logistics business - process to outsourcing analyze is necessary for each of the cases. The outsourcers - enterprises expenses present a necessity to account the number of terms and factors with a matter to make an outsourcing project successful for the Customer and Outsource – Company.

The concrete analyses help to clarify in which directions outsourcing implementation are more effective and resources saving with outsourcing help give a possibility not only to survive in the crisis conditions but to get a success.

Using of the considered and improved models and attitudes will help to raise a relevant management decisions anyway, but hardly make the process of decision making easier.

REFERENCES

[1] Bagchi P., Virum H. European logistics alliances: a management model. *International Journal of Logistics Management*, **7** (1) (1996), 93–108.

[2] Sahay B.S., Mohan R. 3PL practices: an Indian perspective. *International Journal of Physical Distribution & Logistics Management*, **36** (9) (2006), 666-689. doi: 10.1108/09600030610710845

[3] Percentage of 3PL users who outsource logistics services as of 2018, ranked by the most frequently outsourced services. Available at: https://www.statista.com/statistics/660142/transportation-and-logistics-mostoutsourced-services/

[4] Krasnoshapka V.V., Trohumets I.I. Outsourcing and its application in enterprises of Ukraine. *Efektyvna ekonomika*, **5** (2015). Available at: http://www.economy.nayka.com.ua/?op=1&z=4097. (in Ukrainian)

[5] Tryfonova O.V., Trushkina N.V. State of Ukrainian transport logistics, its problems, and development tendencies. *Herald of the Economic Sciences of Ukraine*, **1** (2019), 143–149. Available at: http://nbuv.gov.ua/UJRN/Venu_2019_1_25. (in Ukrainian)

[6] Glushenko T.M. Analysis of logistics services in modern world market. *Scientific Herald of Kherson State University*, **6** (1) (2014), 169-171. Available at: http://nbuv.gov.ua/UJRN/Nvkhdu_en_2014_6%281%29__42 (in Ukrainian)

[7] Zavgorodniy K.V. Development of logistics outsourcing as a tool for managing regional transformations. *Scientific Herald of Kherson State University*, **21** (2016), 96-99. (in Ukrainian)

[8] Pasichnyk A.M., Lebid I.H., Kutyriev V.V., Buherko K.M. Problems and prospects of development of a logistic outsourcing in transport system of Ukraine. *Upravlinnia proektamy, systemnyi analiz i lohistyka. Seriia "Tekhnichni nauky"*, **14** (1) (2014). Available at: https://docplayer.net/ 38988615-Problemi-ta-perspektivi-rozvitku-logistichnogo -autsorsingu-v-transportniy-sistemi-ukrayini.html (in Ukrainian)

[9] Bilovskyi K.E. Status and prospects of development of the logistics services market in Ukraine. *Herald of Khmelnytskyi national university. Economic sciences*, **4** (2) (2016), 25-29. (in Ukrainian)

[10] Hrytsyna L.A., Koshivska M.V. Current state and development prospects of transport logistics in Ukraine. *Market Infrastructure*, **18** (2018), 11-18. Available at: http://www.market-infr.od.ua/journals/2018/18_2018_ukr/5.pdf (in Ukrainian)

[11] Hryniv L.V., Sinicia S.M. Ways to increase the competitiveness of international transport. *Khmelnitsky National University scientific-theoretical journal. Science and economics*, **19** (2010), 115–121. (in Ukrainian)

[12] Mykhailiv H.V., Voloshchuk I.A., Oleksyuk V.M. Mechanisms of formation and peculiarities of development of logistic infrastructure of the region. *Bulletin of the Carpathian University. Economy series*, 12 (2017), 29–36. (in Ukrainian)

[13] *Economic statistics / Economic activity / Transport*. Available at: http://ukrstat.gov.ua/operativ/menu/menu_u/tr.htm (in Ukrainian)
[14] *List of Companies - Third Party Services in Logistics Management (3PL) – Ukraine*. Available at: https://ua.kompass.com/a/услуги-третьеи-стороны-в-управлении-логистикои-3pl/7594025/ (in Russian)
[15] *Sustainable Logistics Strategy and Action Plan for Ukraine. A project for consideration.* Available at: https://mtu.gov.ua/files/Logistics.pdf (in Ukrainian)
[16] *Outsourcing as a tool for service logistics*. Available at: https://studme.com.ua/1595021014291/logistika/autsorsing_kak_instrument_servisnoy_logistiki.htm (in Ukrainian)13
[17] Logistics as a tool for optimizing business processes and the direction of scientific knowledge. Available at: https://pidru4niki.com/71570/logistika/logistika_instrument_optimizatsiyi_biznes-protsesiv_napryam_naukovogo_piznannya (in Ukrainian) 15
[18] Dovba M.O. *Outsourcing in the market of logistics services: prospects in Ukraine*. (in Ukrainian)21
[19] Liginenko L.O., Frolova Yu.Yu. *Outsourcing as a tool to optimize and improve business performance*. Vtntdzhment, Kyiv, 2005. (in Ukrainian)
[20] Hryniv L.V., Vachil O.P. Methods for evaluating the effectiveness of managerial decision making in uncertainty. *Bulletin of the Carpathian University. Economy series,* **11** (2015), 292–296. Available at: http://nbuv.gov.ua/UJRN/Vpu_Ekon_2015_11_58. (in Ukrainian)
[21] *Logistics outsourcing*. Available at: https://tsl.kname.edu.ua/index.php/en/8-glavnaya/26-logistic-outsourcing (in Ukrainian)
[22] *2019 third-party logistics study: The State of Logistics Outsourcing*. Available at: https://www.supplychain247.com/paper/2019_third_party_logistics_study_the_state_of_logistics_outsourcing
[23] Zaloznova Yu.S., Trushkina N.V., Kocheshkova I.M. System approach to risk management of logistic activity of enterprises. *Herald of Khmelnytskyi national university*, **3** (2) (2018), 50–53. Available at: http://nbuv.gov.ua/UJRN/Vchnu_ekon_2018_3%282%29__11 (in Ukrainian)
[24] *Catalog of enterprises of Ukraine*. Available at: https://yellow.com.ua/rList.aspx?r=1008 (in Russian)
[25] Langley J. *Third-Party Logistics Study*, 2018. Available at: https://mymaritimeblog.files.wordpress.com/2017/10/3pl_2018_study.pdf

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Ткач Олег, Гринів Любов, Михайлів Галина. Логістичний аутсорсинг як ефективний механізм діяльності підприємства. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 97–114.

Метою статті є обгрунтування логістичного аутсорсингу як ефективного механізму підвищення ефективності діяльності підприємства.

Автори узагальнюють аргументи та контраргументи в науковій дискусії щодо логістичного аутсорсингу як одного з найкращих методів оптимізації ресурсів у діяльності підприємств, одного з важливих факторів сучасного бізнесу. Систематизація результатів дослідження наукових джерел дозволила виявити проблеми використання аутсорсингу в різних сферах діяльності суб'єктів господарювання. Систематизація досліджень аспектів управління підприємством на основі логістичних підходів дозволила сформулювати твердження про те, що особливе значення у всьому світі в логістиці приділяється аутсорсингу. Протягом багатьох років у цій галузі спостерігається

тенденція до передачі частини або всіх функцій логістики спеціалізованим компаніям, і аутсорсинг логістичних послуг використовується переважною більшістю підприємств. Оскільки, із вищим рівнем споживання в країні, виникає більша необхідність залучати до ланцюга поставок товари кваліфікованих логістичних операторів та переводити частину їх операцій на логістичний аутсорсинг.

Автори оцінюють логістичний аутсорсинг підприємства ПП "ВЕГА ЛТД" за методом Желінського Ю.А., який поєднує зміну доходів і витрат підприємства. На підставі розрахунків доведено, що аутсорсинг для ПП "ВЕГА ЛТД" є економічно доцільнішим. Тому ефективно використовувати підрядні послуги не лише для транспортної логістики, а й для іншої логістичної діяльності підприємства.

У процесі дослідження проблем логістичного аутсорсингу та його впливу на ефективність зовнішньоекономічної діяльності компанії автори довели, що аутсорсинг у логістиці є однією з найсучасніших бізнес-моделей. Використання цього підходу дає змогу досягти значних конкурентних переваг у діяльності підприємства. Основними мотивами, що обумовлюють аутсорсинг логістичних функцій, є: бажання зробити бізнес керованим, зменшити трансакційні витрати при одночасному отриманні якісного обслуговування та прибутку. Результати дослідження мають практичне значення і можуть бути корисними науковцям, зацікавленим у вивченні логістичного аутсорсингу, а також підприємствам, де аутсорсинг використовується найчастіше.

Ключові слова: логістичний аутсорсинг, види аутсорсингу в логістиці, постачальники логістики, оператори, форми співпраці підприємств, логістичні послуги.

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MECHANISM OF TRANSFORMATION OF AGRICULTURAL ENTERPRISES IN TERMS OF INNOVATIVE DEVELOPMENT

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Abstract. The mechanism under study should be aimed at introducing innovative approaches to the modernization of technical l and technological cycles of production and economic processes, strengthening the competitive position of enterprises in the agrarian market and overcoming internal and external institutional barriers to enterprise development by suppressing irrational institutional influences on the functioning. The purpose of this study is to substantiate theoretical and methodological foundations and to develop applied approaches for implementing the mechanism of transformation of agricultural enterprises in a competitive environment. The scientific novelty of the obtained results lies in the substantiation of the mechanism of transformation of agricultural enterprises, which includes such components as: information and analytical tools (monitoring of the economic environment, verification and systematization of information data, establishment of essential laws and relationships, the formation of information bases of decision making, management, design-testing apparatus (designing a perspective plan for the transformation of agricultural enterprises, pilot testing of the target project of the proposed changes in the organizational and legal form of management, adjustment of the project of transformation of enterprises) and implementation-block (formation of innovative structures of agricultural enterprises, ensuring the sequence and consistency of implementation of target changes, minimization of conflict environment in the process of transformation in balancing the duties, process responsibilities and responsibilities in terms of the structural components of the new organizational and legal system). The social and economic effect of this mechanism is achieved through a synergistic effect obtained through the functional interaction of enterprises that are able, however, to work autonomously. The practical significance of the mechanism is manifested in the ability to generate comprehensive management support in the process of transformation of agricultural enterprises, taking into account the specifics of a particular organizational and legal form of management in a competitive environment of their operation.

Keywords: agricultural enterprises, transformation, integration, mechanism, monitoring.

JEL Classification: F15, L25, O13.

1. INTRODUCTION

The market environment encourages agricultural enterprises to find ways to strengthen their position in the industry (market). Competition and the desire to function effectively necessitate constant innovative development of economic entities. Innovations are related to technological progress. The innovative potential of the enterprise is formed by a set of appropriate resources that create conditions for its movement in an innovative way. The ability of the enterprise to transform its activities in a diversified economy, including the organizational and legal form of management, is one of the directions of its innovative development in accordance with existing conditions.

The functioning of the domestic agrarian sector of the economy of Ukraine necessitates the implementation of continuous structural shifts, changes and upgrades in the system of production and economic activity of agricultural enterprises, which are able to ensure a high level of dynamic competitiveness, both in the internal and external agrarian markets given the impact of destabilization of financial threats. The modern subject-branch model of functioning of the agroindustrial complex, formed as a result of the long-term incompleteness of agrarian reform in the state, on the one hand ensured the redistribution of ownership rights to the means of production, the emergence of new organizational and legal forms of economic management in the agrarian market improving the efficiency of production and economic business processes of agricultural enterprises, the possibility of access of the population to the purchase of basic foodstuffs, the creation of prerequisites for strengthening the food security of the state, and on the other - laid the foundation for the production of threats to the irrational functioning of agricultural enterprises and the agrarian sector of the economy as a whole, namely: deepening of subject and sectoral imbalances in the development of the agricultural sector, lack of equal access of agricultural enterprises to the possibility of increasing their resource base, aggravation of agricultural enterprises, partial monopolization of certain segments of the agrarian market, strengthening of spatial and territorial disproportion of the development of rural areas, the formation of an irrational mechanism for the distribution of material goods among agricultural producers, limiting the parameters to support the processes of extended reproduction and sustainable development of agricultural enterprises.

2. THEORETICAL BACKGROUND

The transformational processes currently taking place in Ukraine's agriculture are an element of many scientific discussions. Today, the transformation processes occurring in agricultural enterprises are at an initial level. The transformation of organizational and legal forms of agricultural enterprises is considered by us as an institutional superstructure for improving the principles of their functioning, technical and technological apparatus of formation and implementation of management decisions and functional components of social and economic transformations in agricultural production.

Transformation processes in agriculture can be considered by the following criteria: economic content, orientation, main task, causes, scale, coverage of elements and character [1]. However, it will also be advisable to distinguish such criteria an institutional superstructure of the technical and technological apparatus, functional components of the implementation of social and economic transformations in the field of agricultural production.

The authors [2, p. 204] identify transformation through the prism of sustainable development, which is a general concept for balancing the needs of humanity and protecting the interests of future generations, including their need for a safe and healthy environment.

The transition of Ukraine to market relations also changed the system of attitude to transformation processes in agriculture, and including those related to the transformation of different organizational and legal forms of management [3, p. 204]. It can be argued that transformations carried out both in the regions and in Ukraine are insignificant because they did not contribute to the effective development of rural enterprises.

The central elements of the process of transformation of all economic instruments are that they operate at a decentralized level through their influence on market relations, not through the government [4, p. 658]. Agreeing with the above facts regarding the transformation of the agricultural sector, it is also worth noting the lack of clear benchmarks and the purpose of implementation.

The transformation of agriculture is also seen as a gradual transition from a command and administrative to a market management system, and as a result will be a transition to a new economic system [5, p. 204].

In the definitions concerning the transformation of agricultural enterprises, it is important to note the increase in foreign direct investment and the openness of trade, which are important elements for the economic success of transformation processes [6, p. 253]. This theory is widely used in the scientific community and its influence on the formation of transformation processes needs further research.

The authors of [7, p. 35] also see the transformation of agricultural enterprises in the active growth and increase of the potential of renewable energy in them. We agree that rising electricity prices will encourage agricultural enterprises to develop renewable energy.

Among the most important processes of transformation of agricultural enterprises should be: be a social revival, new approaches to tax and financial policy [8, p. 43]. The studies explain that, when justifying the process of sustainable development of the agricultural sector, it is particularly important to provide the need for achievement strike a balance between social and financial costs in the economically viable economic activity of agricultural enterprises.

Considering the problems of transformation processes in agricultural enterprises the shortest way to bring the agriculture of Ukraine to the level of the most developed countries in agrarian relation is the creation and functioning of integrated associations with the participation of the financial, industrial capital and foreign investors [9, p. 166]. Agreeing with this statement, the problem is derived from the fact that a number of factors, in particular social, political, economic, organizational, and environmental factors, are affected by transformation processes, and the resolution of this problem should be the main focus of public policy.

Continuing to study the transformation processes in agricultural enterprises, it is necessary to consider the issues of accounting organization [10, p. 378]. That is, an effective mechanism for the transformation of agricultural enterprises should create opportunities to adapt their activities to changes in international standards.

Special attention is paid to the conclusions of a representative of the Bulgarian school, as he considers that the transformation processes should focus on establishing social relationships between entrepreneurs and entrepreneurship [11, p. 161]. In addition, an important point in researching the reasons that drive agricultural enterprises to transformation, as evidenced by the research conducted [12, p. 152], is a system of tools, levers and incentives used to shape and retain competitive advantage by influencing the enterprise's economic activity.

However, the question of the practical implementation of transformation processes in agricultural enterprises in a competitive environment remains open [13]. That is, transformation can act as evolution or change in the development of nature and society.

When researching the processes of the transformation, scientists often combine it with integration processes. In particular, scientists from Arkansas [14, p. 194], believe that the integration processes will mainly depend on better road quality, distance between markets. Integration processes are an objective tool that accumulates changes that are already evident in transformation processes, and a subjective tool can be created by the reform society to improve their effectiveness. Integration processes taking place in agricultural enterprises will help to improve food security and improve technical efficiency [15, p. 97]. In particular, their provisions relate only to what needs to be done to strengthen integration processes and competitive positions, but they do not specify how this should happen.

There is a considerable number of concepts of transformation and integration processes of agriculture in a competitive environment, the authors of which interpret the concepts of transformation processes differently without suggesting how they should occur in agricultural enterprises, which complicates the possibilities for its implementation.

Such prerequisites substantiate the feasibility of designing an effective mechanism for market transformation of agricultural enterprises, which will ensure the formation of resource capacity for the adequate prompt response of these enterprises to the emergence of threats in the economic environment and their functioning in the face of constant changes and information uncertainty.

Development of the mechanism of transformation of agricultural enterprises of different organizational and legal forms of management in the conditions of a competitive environment should take into account:

– a priority model for the development of the agrarian sector of the economy and prospective directions of land reform in Ukraine;

– the imperfection of institutional support of agricultural production and economic activity;

– the innovative character of development and decision-making at macro, meso and micro levels of economic development;

– traditions of activity in the agrarian sector, as well as the formed experience of managers and employees of economic entities;

– resource limitations of material and financial resources of agricultural enterprises;

– information uncertainty in making management decisions by agricultural managers in market conditions;

– forecasts for the development of agricultural enterprises in the conditions of competition in meeting the needs of consumers.

3. RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The purpose of the article is to substantiate theoretical and methodological foundations and to develop applied approaches for implementing the mechanism of transformation of agricultural enterprises in a competitive environment.

Methodological principles of developing the mechanism of transformation of agricultural enterprises are: the necessity for innovative development of agricultural enterprises, in particular in the direction of transformation of organizational and legal forms of their management; consideration of transformation processes as an integral part of the market management system; priority of the human factor and managerial influence in the implementation of transformation processes; the need for timely and complete information support of this process; focus on social and economic efficiency of enterprises and the functioning of the industry.

Any mechanism consists of functional constituent components, elements, tools and blocks, a complex combination of which ensures the continuous operation of the target mechanism, the effective execution of the functions delegated to it and the strategic orientation to achieve a clearly set goal. In particular, the mechanism of transformation of organizational and legal forms of management of agricultural enterprises in a competitive environment provides for the feasibility of designing such a model of functioning of the agricultural enterprise, which will allow ensuring rational and balanced use of existing resource base, maximum parameters of efficiency of development of the main production and economic business processes of the enterprise, the high level of the rapid response of an agricultural enterprise to changes parameters of conditions of internal and external economic environment, as well as fulfillment of the strategic mission of the enterprise in the agrarian market.

Ensuring the functional capacity of the mechanism of transformation of agricultural enterprises of different organizational and legal forms of management in a competitive environment should include the following criteria based on the following principles:

– systematic (coherence of the functional elements of the target mechanism in the process of its operation, aimed at eliminating possible threats and internal contradictions in the implementation of its assigned functions);

– sustainability (the ability of the mechanism of transformation of agricultural enterprises to function in the conditions of the impact of destabilization of negative factors);

– balance (the existence of a rational organizational structure of the target mechanism, which provides for the optimal distribution of powers, duties and responsibilities between its constituent components);

– consistency (conformity of the mechanism of transformation of organizational and legal forms of agricultural enterprises to modern challenges, requests and needs of their business environment);

– adaptability (ability of the target mechanism to respond promptly to perspective changes in the parameters of functioning of agricultural enterprises);

– autonomy (the ability of individual structural components of the mechanism to continuously perform the functions assigned to them, regardless of the performance of other components of this mechanism);

– forecasting (the ability of the target mechanism to diagnose the input information and produce prognostic scenarios for the development of transformation processes of agricultural enterprises).

In the course of research, the methods of generalization, systematization, system, sociological, analysis, tabular, graphic are used.

The information base of the study was the work of agrarian economists, data from the State Statistics Service of Ukraine, the results of a questionnaire.

4. Results and Discussion

The functioning of agricultural enterprises of various organizational and legal forms in 2007-2018 and trends in their transformation are given in table. 1.

Organizational and legal forms of management	Unit of measurement	Year					2018 to, %, percentage points	
		2007	2012	2015	2017	2018	2007 p.	2012 p.
Business associations	unit	7428	8235	7721	6967	7148	96,2	86,8
	%	12,72	16,66	17,02	15,29	16,01	-3,29 p.p.	-0,65 p.p.
Private enterprises	unit	4229	4220	3627	3215	3134	74,1	74,3
	%	7,24	8,54	7,99	7,06	7,02	-0,22 p.p.	-1,52 p.p.
Farms	unit	43475	34035	32303	34137	33164	76,3	97,4
	%	74,46	68,88	71,19	74,93	74,28	-0,18 p.p.	5,4 p.p.
Agricultural production cooperatives	unit	1262	848	596	448	429	34,0	50,6
	%	2,16	1,72	1,31	0,98	0,96	-1,2 p.p.	-0,76 p.p.
Others enterprises	unit	1633	1781	891	592	589	36,1	33,1
	%	2,8	3,6	1,96	1,3	1,32	-1,48 p.p.	-2,28 p.p.
State enterprises	unit	360	296	241	199	183	50,8	61,8
	%	0,62	0,6	0,53	0,44	0,41	-0,21 p.p.	-0,19 p.p.
Together	unit	58387	49415	45379	45558	44647	76,5	90,3
	%	100	100	100	100	100	100	100

Tab. 1. Number of all organizational and legal forms of agricultural enterprises of Ukraine for 2007–2018. Source: [16, p. 138].

In 2018, compared to 2007, there was a quantitative decrease in all registered forms of agricultural enterprises, which indicates their merger and consolidation, reorganization and liquidation. One of the possible variants of this decline is also the processes of transformation, in particular the registration of new companies, as well as those that were inseparable structural units of processing and other enterprises. In general, reductions also occurred in business associations by 3,8 %, private enterprises by 25,9 %, farms by 23,7 %, agricultural cooperatives by 66,0 %, other enterprises by 63,9 % and state-owned enterprises - by 49,2 %.

Substantiation of the mechanism of transformation of agricultural enterprises is important in view of the deepening of irrational tendencies of functioning of the agrarian sector of the Ukrainian economy, which implies an increase in the excessive concentration of production and economic capacities of certain entities of agro-industrial complex and the strengthening of competitive positions of the so-called agroholdings markets. This situation is dangerous not only for the economic aspects of management (exacerbation of unfair competition, complication of access to the market of small agricultural producers, deepening of industrial and sectoral imbalances in the agrarian market), but also social (deepening of unfair distribution of material goods strengthening in the balance of social balances in society imbalance of spatial regional development of rural territories, reducing the level of social responsibility of economic entities to the rural population) and environmental (reproduction obstruction productive capacity of ecosystems in rural areas, complicated solution of problems of rational use of nature, total irrational intensification of production and economic processes of agricultural enterprises).

It should be noted that the strategic criterion for optimizing the design of the functional components of the mechanism of transformation of organizational and legal forms of agricultural enterprises must be the priority of increasing the parameters of the efficiency of the development of basic business processes. In addition, achieving this goal is complicated by the systemic imperfection and imbalance of the institutional environment of agribusiness entities. In this regard, the targeted mechanism of transformation, on the one hand, should be focused on the introduction of innovative modernization of technological cycles of production and economic processes and strengthening the competitive position of agricultural enterprises in the agrarian market, and on the other - overcoming existing internal and external institutional barriers of development of these enterprises by displacing irrational institutional influences on the functioning of the latter. This will provide an opportunity to create an adequate subjective structural model of functioning of domestic agriculture based on the formation of a priority institutional agrarian matrix, which will meet the requirements and needs of the market, and will also allow taking into account the interests of all participants of the food value chain in the environment of agricultural production: suppliers, producers, intermediaries and consumers of agricultural products.

Improvement of organizational and legal forms of management of agricultural enterprises in the process of transformation should provide the formation of opportunities for comprehensive development of personnel staff of these enterprises, improvement of its professional competences, continuous intellectual perfection, building of high moral and ethical standards of corporate culture organization, improvement of the moral and psychological standards. Strengthening material and intangible forms of work motivation, as well as increasing the level of social individual employee's responsibility for the end result of his activities in the process of production and economic activity.

The conceptual scheme of the transformation of agricultural enterprises of different organizational and legal forms of management is presented in Fig. 1.

The applied significance of the transformation of agricultural enterprises is that this process will allow a particular entity to choose the most acceptable in modern realities of organizational and legal form of management given the availability and adequacy of resources (material and technical, personnel, information, etc.).

Transformation of agricultural enterprises of different organizational and legal forms of economic activity suggests expediency of realization of structural changes in activity of these enterprises, and also requires preconditions on flexible characteristics which could provide possibility of implementation of projected changes in the functioning of transformation mechanism of agricultural enterprises. Therefore, ensuring the efficiency of transformation processes should occur in the context of such complex implementation of preparatory procedures as:

– monitoring of the economic environment of the agricultural enterprise (involves a complex organization of collecting internal and external information data, their processing, systematization and storage in order to minimize the risks of uncertainty of the information environment regarding management decisions in the process of transforming the organizational and legal form of enterprise management in a competitive environment);

– diagnostics of strategic business processes of an agricultural enterprise (aimed at identifying structural gaps and weaknesses of the organization of production and economic activity of the enterprise, identifying the mismatch of its sectoral structure to the available resource provision, definition of restrictions that constrain the increase of production and economic capacity of organizational and legal nature search of space capacity of increasing the parameters of efficiency of functioning of agricultural enterprises);

– modeling of priority directions of agricultural enterprise development (involves implementation of project procedures for forecasting probable optimistic and pessimistic scenarios of enterprise development taking into account potential parameters of its production and economic capacities, promising consumer expectations in the agrarian market and obtained competitive advantages, due to potential, implemented changes of organizational and legal nature in the activity of agricultural enterprise).

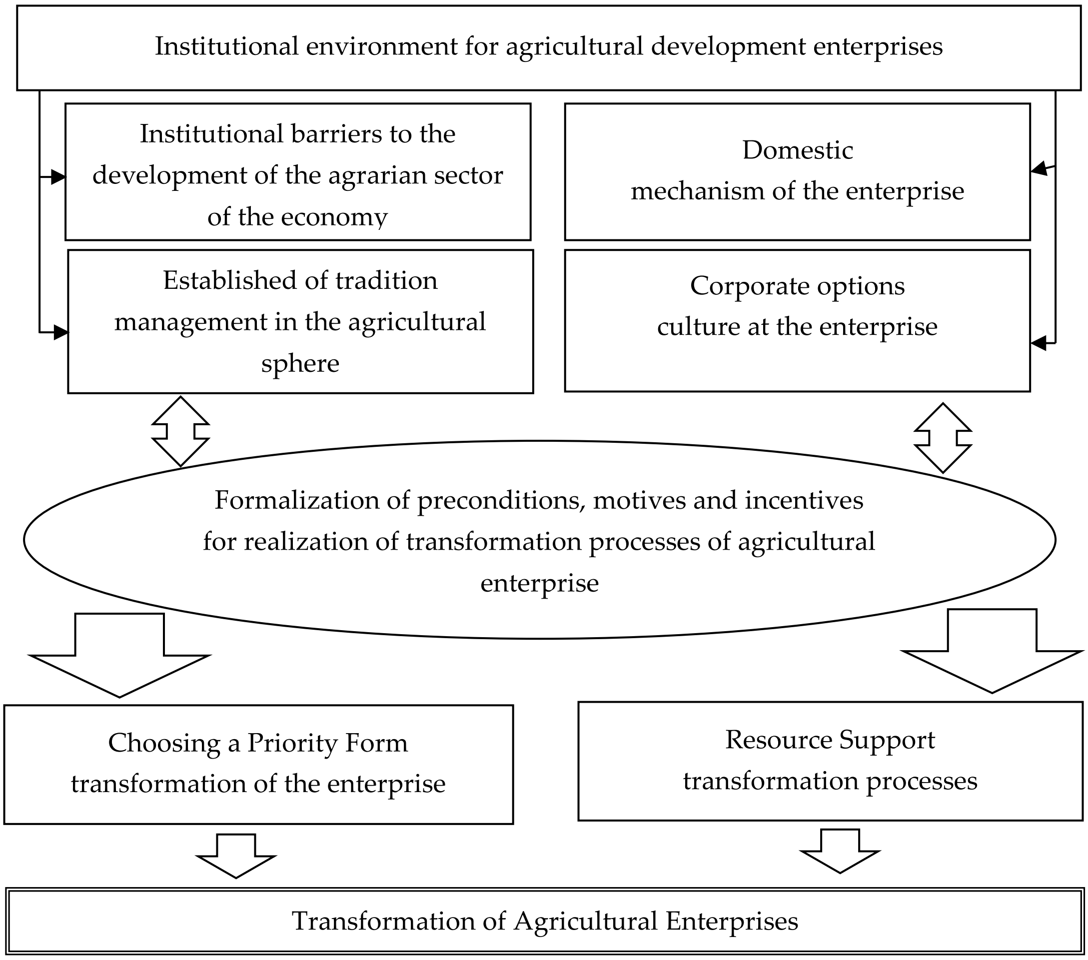

Fig. 1. The scheme of transformation of agricultural enterprises. Source: developed by the authors.

The implementation of the mechanism of transformation of organizational and legal forms of agricultural enterprises implies the implementation of systemic changes, the realization of which may hinder both individual representatives of management and specific employees of the enterprise. This is due to a number of factors, including the low level of adaptation of personnel to new parameters of functioning of the agricultural enterprise, in particular the inert nature of thinking of employees, fears of losing some of their powers and expanding the area of responsibility of managers, unwillingness to learn and improve their professional skills and the rate of pay margin in the form of wages, the probability occurrence of a potential conflict of interest between workers of the agricultural enterprise, the risk of destruction of established industrial and economic linkages and business relationships between contractors.

Logically, such fears and possible opposition to potential changes in the process of transformation of agricultural enterprises have subjective rather than objective character. Therefore, the implementation of the applied aspects of the target mechanism should take into account the social and psychological aspects of the transformation of organizational and legal forms of agricultural enterprises, which explains the benefits of the transition to new principles of management, minimization of staff turnover in the process of changing the organizational and legal form of agricultural enterprise, to strategic focus on preservation enterprise in the context of minimizing the dismissals of the most qualified employees, the possibility of career advancement and improvement of personnel motivation of staff in the process of transformation of agricultural enterprises, eliminate conflicts and complex moral and psychological climate in the team change the results of the legal form of management.

The biggest systemic changes in the process of transformation of agricultural enterprises occur in the organizational structure of the latter. In this aspect, it is important not only to ensure a balance of managerial influences in the process of implementation of transformational changes, but also to design a rational organizational structure of the agricultural enterprise, optimal distribution of functional responsibilities between the structural units of the enterprise, guaranteeing the parity of control powers of management personnel. Perspective organizational structure of an agricultural enterprise should be coordinated with its priority production directions, which will allow to ensure a harmonious combination of organizational management and production-economic processes, to guarantee the maximum effective use of the existing resource base of the enterprise, to increase the efficiency of strategic business processes development, to improve the economic activity of the enterprise, to minimize management and transaction costs in the process of implementing the mechanism of transformation of agricultural enterprises of different organizational and legal forms of management.

The mechanism of transformation of business societies, including powerful agroholding structures, should first and foremost aim at enhancing social component and responsibility in the process of managing and utilizing the capacity of rural ecosystems. Thus, the improvement of the organizational and legal form of economic activity should provide for the creation in the structure of companies of socially-focused trust funds for the support of employees of agricultural enterprises, improvement of their working and living conditions, increasing quality of life of the rural population, development of objects of the social and economic infrastructure of rural territories. Adherence to this approach will not only stimulate the level of social justice of distribution of material goods among the participants of agrarian production, but will also cause a structural impulse to improve the motivation of the employees of the companies, which in the aggregate will increase the efficiency of work of the personnel staff of the enterprises. In this context, it is important to ensure equal access for employees of the enterprise to investment opportunities in the production and economic activities of the agricultural enterprise through the acquisition of a share in the authorized capital, which, on the one hand, will allow diversifying sources of filling the financial capacities of companies, and on the other - to guarantee participation of employee of the company in the distribution of future profits. The strategic task of the mechanism of transformation of powerful agroholding structures is the formation of a rational model of concentration of production and resource capacities (agricultural lands, financial resources, agricultural machinery, human capital). In this regard, it is advisable to implement tools to stimulate the legal registration of structural units of agricultural holdings at the actual place of business. This minimizes the risk of excessive irrational concentration of agricultural production capacities and reduced management of strategic business processes, and creates the preconditions for filling the budgets of rural councils through the implementation of tax payments.

In the process of transformation of private agricultural enterprises, an important aspect of the activity is the strategic formation of opportunities to increase their production capacity and create the preconditions for attracting external borrowing capital, aimed at improving the material base and increasing the level of technical and technological support. Therefore, it is advisable both to implement the mechanisms of transformation of some agricultural enterprises into joint stock companies, and to preserve the traditional way of management and organization of production and economic processes, the target of which should be the production of quality organic agricultural products, guaranteeing a rich competitive environment in the agricultural market preservation of principles of rational nature management in the countryside. The transformation of the organizational and legal form of management of private agricultural enterprises should correspond to the formation of their rational production and branch model. This situation from one point of view makes it advisable to focus on expanding the scale of enterprise management, developing new niches in the agrarian market, intensifying the process of implementation of innovative projects in agroindustrial complex, diversifying the manufacturing of products at the agricultural enterprise, and from another - optimizing production and industry structure of management harmonization of strategic goals with enterprise resource capacities, balancing of crop and livestock industries, stimulation of non-agricultural species of business activities. Ensuring adherence to such an approach will lead to the prerequisites for the formation of a number of competitive advantages for private agricultural enterprises, such as construction of closed cycle waste-free production, rational use of natural ecosystems capacity, support for fertility restoration of soil cover of agricultural land, partial avoidance of seasonal to the agricultural enterprise only agrarian production, overcoming imbalances in financial flows agricultural during the calendar year.

In the process of forming strategic orientations of the mechanism of transformation of production cooperatives it is advisable to take into account the specific characteristics inherent in this organizational and legal form of economy, such as integration approaches to the organization of agricultural production, the practice of collegial decision making, joint management of the production capacities of cooperatives administration features of productive and economic activity of the cooperative, parity distribution of powers, duties, responsibilities and volumes of the received profits between the statutory members of the cooperative association. Transformation of an agricultural production cooperative should involve building vertically-integrated relationships between value-added entities, business relationships that must be clearly regulated and harmonized, which, on the one hand, will form the prerequisites for optimal efficiency of vertically-integrated business processes. and, on the other, minimizes the risk of conflict and confrontation between the members of the cooperative association. Priority is given to strengthening the function of servicing cooperative structures in the context of limited logistical support for agricultural enterprises and households, which requires the design of a target format for the organization of cooperative relationships with other participants in the agricultural sector based on the expansion of the traditional list of major types of economic growth services in the profit structure of the cooperative association.

The formation of a balanced model of the agrarian sector of the Ukrainian economy provides for the feasibility of establishing and supporting the development of farms as a priority organizational and legal form of farming in rural areas. The defining role of farming is not only to provide the population with quality organic products, but also to increase the level of competitive environment in the agrarian market, to intensify the processes of agrarian deconcentration, to increase employment among the rural population and to form a strong middle class in rural areas. At the same time, imperfect reforms and institutional processes could not adequately influence the establishment and approval of farms that meet the requirements and needs of the time. Therefore, the implementation of the mechanism of transformation of farms should be aimed at their structural restructuring, increasing production and economic capacity and strengthening competitive positions in the agrarian market. In order to do this, it is necessary to form incentives for consolidation of farm resource capacities, to create regional farm clusters of agricultural production, to implement tools for lobbying the interests of farms in the agrarian market, to improve the management, financial and accounting and statistical support of agricultural production. According to M. Shulsky, significant financial resources are needed to solve this problem, which are insufficient in farms [17, p. 296]. Priority is given to institutional support for the establishment of farms on a family-type basis, which, on the one hand, will overcome the negative social and economic consequences of structural unemployment in rural areas, and on the other hand, will ensure the adoption of approaches to the rational use of natural ecosystems in rural areas and responsible attitude of the farmer-owner for his final management results.

The functioning of the mechanism of transformation of organizational and legal forms of management in the segment of state agricultural enterprises should be aimed at overcoming irrational approaches to the organization of management of these enterprises. It should be noted that state agricultural enterprises are characterized not only by low economic performance, but also by the loss of agricultural production, irrational approaches to management, corruption and abuse in the use of state property owned by these enterprises, including in land use. Therefore, the transformation of state agricultural enterprises must be aimed at reducing the share of the public sector in the process of managing and organizing production and business economic processes on the basis of privatization procedures with the possibility of selling the assets of enterprises at the maximum possible price, partial transfer of agricultural land of state enterprises in the possession of newly created united territorial communities, transformation of enterprises into business associations and private enterprises. Adherence to this approach will create preconditions for overcoming structural abuses in the sphere of state property in the agro-industrial complex, and will also improve the efficiency of the latter in the economic process.

Substantiation of the mechanism of transformation of agricultural enterprises of different organizational and legal forms of management provides for the expediency of developing its structural components, such as informational and analytical tools, design-testing apparatus and implementation-block, which, on the one hand, are capable of working independently and, on the other their synergistic combination of functional interaction is capable of generating complex managerial support in the process of effective transformation of agricultural enterprises in a competitive environment, considering the specific organizational and legal form of business management.

The informationally analytical toolkit of the mechanism of transformation of organizational and legal forms of agricultural enterprises should reduce the level of uncertainty regarding the decision-making in the process of transformation. For this purpose, it is necessary to organize the collection, processing and systematization of input information, their verification, validation and diagnostics for further formulation of objective conclusions and proposals regarding perspective directions of transformation and development of agricultural enterprise in the competitive environment of the agrarian sector of the Ukrainian economy. It is advisable to set up monitoring structures to observe changes in the parameters of the conditions of the internal and external environment of the agricultural enterprise, installation the deviation of the absolute values of the main indicators of production and economic activity from their maximum permissible norms, identify potential threats that may disrupt the effective functioning of the enterprise in the conditions of liberalization of the agrarian market. The objective final results of the functioning of the information and analytical toolkit of the mechanism of transformation of agricultural enterprises is a fundamental basis for guaranteeing an adequate level of efficiency of transformation processes of organizational and legal forms of management.

The functioning of the design-testing apparatus of the transformation mechanism is aimed at developing a priority direction for adjusting and changing the existing organizational and legal form of management of an agricultural enterprise. Within this structural component of the target mechanism, it is advisable to test prospective options for the development of an agricultural enterprise, to coordinate its resource capabilities with strategic goals and objectives, to identify potential economic risks and losses of an agricultural enterprise in the transformation process. At this stage, it is important to ensure the flexibility of the design procedures, which will provide opportunities for prompt adjustment of the targeted transformation project, taking into account the maximum number of rational comments and proposals, minimizing the budget costs of the agricultural enterprise in the process of transformation of its organizational and legal form of management. The formalization of the design-testing apparatus implies the availability of a high level of intellectual and human resources of the agricultural enterprise, since the project work requires the implementation of a set of experimental procedures in the conditions that are as close as possible to the real ones. Therefore, an alternative for small and medium-sized agricultural enterprises may be the use of outsourcing technology in the process of developing a targeted transformation project that will provide adequate support for managerial decision-making.

The decisive structural component of the mechanism of transformation of organizational and legal forms of agricultural enterprises is the implementation and production unit, whose operation is aimed at introducing priority changes in the production and economic process. Within this component, it is important to form new organizational structures, minimize the risks of resistance of agricultural workers to implemented changes, ensure a clear sequence and consistency of actions in the process of implementation of the developed enterprise transformation project, overcome potential conflicts of interest, maintain established business relationships and contacts of rural businesses counterparties, reduce the transaction costs of the enterprise in the transformation process, minimize the risks of disruption by approved plan of the transformation of the organizational and legal form of agricultural enterprise.

The priority goals, objectives and instruments of implementation of the mechanism of transformation of agricultural enterprises should be differentiated depending on the specifics of a certain organizational and legal form of management. This is caused not only by the effect of the scale of management of the agricultural enterprise but also by the way of organization of production and economic processes, applied principles of formation and distribution of capital, strategic priorities of the agricultural enterprise in the agrarian market, the level of its technical and technological equipment and unused reserves of personnel potential of the enterprise. Implementation of the proposed mechanism of transformation of agricultural enterprises of different organizational and legal forms in a competitive environment requires adequate budget support, the sources of which may be both internal and external funding reserves. It is important in this process that the criteria of optimality regarding the economic feasibility of the potential costs are, taken into account, the scale of the potential economic benefit and the useful effect resulting from the implementation of the design transformation procedures.

5. CONCLUSIONS

Thus, we believe that the mechanism of transformation of organizational and legal forms of agricultural enterprises in a competitive environment is an element of its innovative development. Unlike the existing ones, this mechanism should be positioned through a prism:

– institutional superstructure for improving the fundamental principles of functioning of agricultural enterprises;

– technical and technological apparatus of formation and implementation of managerial decisions in the process of management;

– functional components of implementation of social and economic transformations in the field of agricultural production. The complex implementation of the proposed mechanism will create the preconditions for strengthening the competitiveness of agricultural enterprises, improving the efficiency of their business processes and establishing the principles of rational environmental management in the field of agricultural production.

It should be mentioned that such sectoral subjective distribution of agricultural production has a negative impact on the functioning of the agroindustrial complex and the formation of its competitive position in both domestic and foreign markets, since it provides for the inability to guarantee the production of quality and safe products due to limited control procedures in households, institutional restrictions on the acceptance of agricultural raw materials produced in households by processing enterprises, the problem of the shadow market of agricultural products and so on.

The task of agricultural enterprises in the implementation of this mechanism is also to increase the level of marketability of existing farms, institutionalization of production and economic activities of the latter, the development of cooperative and integration processes between households.

The subjects of the proposed mechanism are agricultural enterprises, which, given the significant role in the agricultural market, especially in the supply of livestock products, are forced to look for effective mechanisms and incentives for the transformation of households into farms and small agricultural enterprises.

REFERENCES

[1] Sosnytska J.S. Transformation in agriculture as an object of study of social geographical sciences. *Scientific Review*, **3** (13) (2015). Available at: https://naukajournal.org/index.php/naukajournal/article/view/441/619 (in Ukrainian)

[2] Pylypiv N.I., Maksymiv Yu.V., Piatnychuk I.D. Conceptual approach to construction of accounting and information provision of social responsibility for business enterprises through the prism of the business partnership system. *Financial and credit activity: problems of theory and practice*, **4** (27) (2018), 201–211. doi: 10.18371/fcaptp.v4i27.154374 (in Ukrainian)

[3] Balaniuk I., Kozak I., Shelenko D., Balaniuk S., Kozak-Balaniuk I. Forecasting of Gross Agricultural Output of Agrarian Enterprises of Ukraine: Case Study with STELLA Software. *Economic Studies (Ikonomicheski Izsledvania)*, **28** (5) (2019), 148–163.

[4] Yakubiv V., Panukhnyk O., Shults S., Maksymiv Y., Hryhoruk I., Popadynets N., Bilyk R., Fedotova Y., Bilyk I. Application of Economic and Legal Instruments at the Stage of Transition to Bioeconomy. *Advances in Intelligent Systems and Computing*, **965** (2019), 656–666. doi: 10.1007/978-3-030-20454-9_64

[5] Smoleniuk R.P. The transformation of agrarian sector of economy on principles of sustainable development. *Innovative Economy*, **6** (2014), 14–20. Available at: http://nbuv.gov.ua/UJRN/inek_2014_6_3 (in Ukrainian)

[6] Tariq G., Sun H., Haris M., Kong Y., Nadeem A. Trade liberalization, FDI inflows economic growth and environmental sustanaibility in Pakistan and India. *Journal of Agriculture and Environment for International Development (JAEID)*, **112** (2) (2018), 253–269. doi: 10.12895/jaeid.20182.722

[7] Yakubiv V., Boryshkevych I. Strategic analysis of the development of renewable energetics in the world and in Ukraine. *Journal of Vasyl Stefanyk Precarpathian National University*, **5** (3-4) (2018), 33–43. doi: 10.15330/jpnu.5.3-4.33-43

[8] Sabluk P.T. Agrarian policy and transformational change is in agriculture of Ukraine of period of becoming of market. *Transformation of rural agriculture: anniversary collection of scientific articles* (2010), 41–47. (in Ukrainian)

[9] Cherevko G.V. Development of agroindustrial complex is in context of transformation of national economy. *Transformation of rural agriculture: anniversary collection of scientific articles* (2010), 157–168. (in Ukrainian)

[10] Yakubiv V.M., Shelenko D.I., Sas L.S. Fixed assets accounting: National and international aspects, *Actual Problems of Economics*, **11** (173) (2015), 375–379. (in Ukrainian)

[11] Angelova M. Performance of Social Entrepreneurs and Social Entrepreneurship in Bulgaria. *Economic Studies (Ikonomicheski Izsledvania)*, **28** (6) (2019), 160–191.

[12] Nykolyuk O.M. Cost Management as a Mechanism for Ensuring the Competitiveness of Agricultural Enterprises. *Biznesinform*, **4** (2016), 150–156. (in Ukrainian)

[13] Nakonechna K.V. Problems and prospects of transformation processes of the agricultural sphere at the regional level. *Efektyvna ekonomika*, **2** (2013). Available at: http://www.economy.nayka.com.ua/?op=1&z=1810 (in Ukrainian)

[14] Tsiboe F., Dixon B.L., Wailes E.J. Spatial dynamics and determinants of Liberian rice market integration. *African Journal of Agricultural and Resource Economics*, **11** (3) (2016), 183–196. doi: 10.22004/ag.econ.245938

[15] Asekenye C., Bravo-Ureta B.E., Deom M., Kidula N., Kalule Okello D., Okoko N., Puppala N. Productivity gaps among groundnut farmers in Kenya and Uganda: A stochastic production frontier analysis. *African Journal of Agricultural and Resource Economics*, **11** (2) (2016), 85–100. doi: 10.22004/ag.econ.241851

[16] Shelenko D.I. *Organizational and legal forms of agricultural enterprises in the economic dimension.* Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, 2019. (in Ukrainian)

[17] Shulskyi M.H. *Farming: Problems of Installation and Development*. Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies, Lviv, 2004. (in Ukrainian)

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Шеленко Діана, Баланюк Іван, Сас Людмила, Матковський Петро, Козак-Баланюк Ірина. Механізм трансформації сільськогосподарських підприємств в умовах їхнього інноваційного розвитку. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 115–127.

Механізм трансформації сільськогосподарських підприємств спрямовується на впровадження інноваційних підходів до модернізації техніко-технологічних циклів виробничо-господарських процесів, зміцнення конкурентних позицій підприємств на аграрному ринку та на подолання внутрішніх і зовнішніх інституційних бар'єрів розвитку підприємств шляхом витіснення ірраціональних інституційних впливів щодо функціонування останніх. Метою даного дослідження є обґрунтування теоретико-методологічних засад і розробка прикладних підходів для реалізації механізму трансформації сільськогосподарських підприємств в умовах конкурентного середовища. Наукова новизна одержаних результатів полягає в обґрунтуванні механізму трансформації сільськогосподарських підприємств, який включає такі складові, як: інформаційно-аналітичний інструментарій (моніторинг економічного середовища, верифікація та систематизація інформаційних даних, встановлення істотних закономірностей і взаємозв'язків, формування інформаційного базису прийняття управлінських рішень), проєктно-апробаційний апарат (проєктування перспективного плану трансформації сільськогосподарських підприємств, пілотне тестування цільового проєкту пропонованих змін організаційно-правової форми господарювання, корегування проєкту трансформації підприємств) та імплементаційно-постановочний блок (формування інноваційних структур сільськогосподарських підприємств, забезпечення послідовності та узгодженості впровадження цільових змін, мінімізація конфліктного середовища в процесі трансформації, збалансування повноважень, обов'язків і відповідальності у розрізі структурних складових нової організаційно-правової системи). Соціально-економічний ефект зазначеного механізму досягається завдяки синергічному ефекту, отриманому завдяки функціональній взаємодії підприємств, спроможних, однак, працювати автономно. Практичне значення механізму проявляється у здатності генерувати комплексну управлінську підтримку у процесі трансформації сільськогосподарських підприємств з урахуванням специфіки конкретної організаційно-правової форми господарювання в умовах конкурентного середовища їх функціонування.

Ключові слова: сільськогосподарські підприємства, трансформація, інтеграція, механізм, моніторинг.

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MODELLING OF DERIVATIVES PRICING USING METHODS OF SPECTRAL ANALYSIS

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Abstract. In this article expands the method of finding the approximate price for a wide class of derivative financial instruments. Using the spectral theory of self-adjoint operators in Hilbert space and the wave theory of singular and regular perturbations, the analytical formula of the approximate asset price is established. Methods for calculating the approximate price of options using the tools of spectral analysis, singular and regular wave theory in the case of fast and slow factors are developed. Combining methods from the spectral theory of singular and regular perturbations, it is possible to estimate the price of derivative financial instruments as a schedule by eigenfunctions. The approximate value of securities and their rate of return are calculated. Applying the theory of Sturm-Liouville, Fredholm's alternative and analysis of singular and regular perturbations at different time scales have enabled us to obtain explicit formulas for the approximate value of securities and their yield on the basis of the development of their eigenfunctions and eigenvalues of self-adjoint operators using boundary value problems for singular and regular perturbations. The theorem of closeness estimates for bond prices approximation is proved. An algorithm for calculating the approximate price of derivatives and the accuracy of estimates has been developed, which allows to analyze and draw precautionary conclusions and suggestions to minimize the risks of pricing derivatives that arise in the stock market. A model for finding the value of derivatives corresponding to the dynamics of the stock market and the size of financial flows has been developed. This model allows you to find the prices of derivatives and their volatility, as well as minimize speculative changes in pricing, analyze the progress of stock market processes and take concrete steps to improve the situation to optimize financial strategies. The used methodology of European options pricing based on the study of volatility behavior and analysis of the yield of financial instruments allows to increase the accuracy of the forecast and make sound management strategic decisions by stock market participants.

Keywords: stock market, derivatives, spectral analysis, spectral theory, singular perturbation theory, regular perturbation theory.

JEL Classification: G11, G13, G32.

1. INTRODUCTION

Short-term interest rate dynamics models were considered in the paper by [12] for derivatives pricing. Significant contributions to the theory of rate of interest were made by [1], [8–10], namely: finding a credit spread of credit market instruments, calculating option prices for interest rates, determining the risk and derivatives' rate of return of the stock market financial instruments. The models developed by these scholars have their advantages and disadvantages, but each of them is used to increase the liquidity of financial markets. Applying more sophisticated models, despite their theoretical justification, leads to obtaining of complex multi-parameter functions of the yield curve, which results in significant errors in calculations.

Using spectral analysis, [5] applied a spectral theory of self-adjoint operators to different models, and to the Vasicek model, in particular. [11] considered the short-term interest rates described by the Vasicek model with stochastic volatility, depending on two factors, one of which is fast, and the other is slowly variable. In our paper, the spectral theory and the theory of singular and regular perturbations are applied to self-adjoint operators in Hilbert spaces that describe processes with multidimensional stochastic volatility having l-fast variables, r-slowly variables, $l \geq 1,\ r \geq 1,\ l \in N,\ r \in N$. This theory is applied to the short-term interest rates described by the Vasicek model, in particular. The approximate value of securities and their yield are calculated. Applying the Sturm-Liouville theory, Fredholm alternatives, as well as analysis of singular and regular perturbations at different time scales, we obtained explicit formulas for convergence of bond prices and their yield. To obtain explicit formulas, we need to solve 2l Poisson equations.

2. THEORETICAL BACKGROUND

The purpose of the article is to establish bond indicative prices and their profitability by methods of spectral theory and theory of perturbations.

Let (Q, F, P) be the probability space that supports a correlated Brownian motion $(W^x, W^{y_1}, \dots, W^{y_l}, W^{z_1}, \dots, W^{z_r})$ and an exponential random variable ε~Exp (1), which is independent of $(W^x, W^{y_1}, \dots, W^{y_l}, W^{z_1}, \dots, W^{z_r})$. We will assume that the economy with (l+r+1) factors is described by the homogeneous time and continuous Markov process $\chi = (X, Y_1, \dots, Y_l, Z_1, \dots, Z_r)$, which is defined in some state space $E = I \times R^l \times R^r$, where $(Y_1, \dots, Y_l) \in R^l$, $(Z_1, \dots, Z_r) \in R^r$. I is the interval at R with points $e_1$and e_2, such that $-\infty < e_1 < e_2 < \infty$. We assume that χ has the beginning at E and instantly disappears once X goes beyond I. In particular, the dynamics of χ with physical measure $\mathbb{P}$ is as follows:

$$\chi_t = \begin{cases} (X_t, Y_{1t}, \dots, Y_{lt}, Z_{1t}, \dots, Z_{rt})), & \tau_I > t, \\ \Delta, & \tau_I \leq t, \end{cases} \quad \tau_I = \inf(t > 0 : X_t \notin I),$$

where $(X, Y_1, \dots, Y_l, Z_1, \dots, Z_r)$, are set

$$\begin{aligned}
&dX_t = v(X_t)dt + a(X_t)f(Y_{1t}, \dots, Y_{lt}, Z_{1t}, \dots, Z_{rt})dW_t^x, \\
&dY_{jt} = \frac{1}{\epsilon_j}\alpha_j(Y_{jt})dt + \frac{1}{\sqrt{\epsilon_j}}\beta_j(Y_{jt})dW_t^{y_j},\ j = \overline{1,l}. \\
&dZ_{it} = \delta_i c_i(Z_{it})dt + \sqrt{\delta_i}g_i(Z_{it})dW_t^{z_i},\ i = \overline{1,r}. \\
&d(W^x, W^{y_j})_t = \rho_{xy_j}dt,\ j = \overline{1,l}. \\
&d(W^x, W^{z_i})_t = \rho_{xz_i}dt,\ i = \overline{1,r}. \\
&d(W^{y_j}, W^{z_i})_t = \rho_{y_j z_i}dt,\ \ j = \overline{1,l},\ \ i = \overline{1,r}. \\
&d(W^{y_j}, W^{y_r})_t = \rho_{y_j y_s}dt,\ \ j = \overline{1,l},\ \ s = \overline{1,l}. \\
&d(W^{z_i}, W^{z_k})_t = \rho_{z_i z_k}dt,\ i = \overline{1,n},\ \ k = \overline{1,r}. \\
&(X_0, Y_{10}, \dots, Y_{l0}, Z_{10}, \dots, Z_{r0}) = (x, y_{10}, \dots y_{l0}, z_{10}, \dots, z_{r0}) \in E.
\end{aligned}$$

where $\rho_{y_j y_s} = 0,\ j \neq r,\ \rho_{z_i z_k} = 0,\ i \neq k\ \ \rho_{xy_j}, \rho_{xz_i},\ \rho_{y_j z_i}$, meet the conditions $\left|\rho_{xy_j}\right|, \left|\rho_{xz_i}\right|, \left|\rho_{y_j z_i}\right| \leq 1$, and correlation matrices of the form:

$$\begin{pmatrix} 1 & \rho_{xy_j} & \rho_{xz_i} \\ \rho_{y_j x} & 1 & \rho_{y_j z_i} \\ \rho_{z_i x} & \rho_{z_i y_j} & 1 \end{pmatrix}$$

semipositively defined, that is $1 + 2\rho_{xy_j}\rho_{xz_i}\rho_{y_j z_i} - {\rho_{xy_j}}^2 - {\rho_{xz_i}}^2 - {\rho_{y_j z_i}}^2 \geq 0,\ j = \overline{1,l},\ \ i = \overline{1,r}.$

Process X may represent many economic phenomena and processes.

3. Research Objective, Methodology and Data

For example, the reserve size, the index price and reliable short-term interest rates, etc. Even more broadly, X is an external factor that characterizes the value of any of the above-mentioned processes. Physical measure $\mathbb{P}$ of process X is understood as the process X, which has an instant drift $v(X_t)$ and stochastic volatility $a(X_t)f(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{n}t})>0$, which contains both components: local $a(X_t)$ and nonlocal $f(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{n}t})$. Note that infinitesimal generators (infinitized) for Y_j and Z_i have the form $\forall\, i,j$

$$\mathfrak{L}_{Y_j}^{\epsilon_j}=\frac{1}{\epsilon_j}\left(\frac{1}{2}{\beta_j}^2(y_j)\partial_{y_jy_j}^2+\alpha_j(y_j)\partial_{y_j}\right),\mathfrak{L}_{Z_i}^{\delta_i}=\delta_i\left(\frac{1}{2}{g_i}^2(z_i)\partial_{z_iz_i}^2+c_i(z_i)\partial_{z_i}\right),$$

are characterized by the measures $\frac{1}{\epsilon_j}$ and δ_i, respectively. Thus, $\mathrm{Y}_1,\dots,\mathrm{Y}_\mathrm{l}$ and $\mathrm{Z}_1,\dots,\mathrm{Z}_\mathrm{n}$ have an internal time scale $\epsilon_j>0$ and $\frac{1}{\delta_i}>0$. We consider $\epsilon_j<<1$ and $\delta_i<<1$, so that the internal time scale Y_j is small, and the internal time scale Z_i is large. Consequently, Y_j , $j=\overline{1,l}$, are fast variables, and Z_i , $i=\overline{1,n}$ are slowly variables. Note that $\mathfrak{L}_{Y_j}^{\epsilon_j}$ and $\mathfrak{L}_{Z_i}^{\delta_i}$ have the form [6]

$$L=\frac{1}{2}a^2(x)\partial_{xx}^2+b(x)\partial_x-k(x),\ x\in(e_1,e_2),\text{з}\ k(x)=0$$

for all $x\in I$, are always self-adjoint in the Hilbert space $H=L^2(I,m)$, where $I\in R$ is the interval with the points e_1 and e_2 and m is the diffusion density rate. $\mathrm{Dom}(\mathfrak{L})\{f\in L^2(I,\mathfrak{m}): f,\partial_xf\in AC_{\mathrm{loc}}(I),\mathfrak{L}fL^2(I,\mathfrak{m}),BCs\ on\ e_1\ and\ e_2\}$ where $AC_{\mathrm{loc}}(I)$ is the space of functions which are absolutely continuous on each compact subinterval I [3]. The boundary conditions for e_1 and e_2 are applied on the output, input, and regular bounds.

We will evaluate the derivatives with payoff at time $t>0$, which may depend on the trajectory X. In particular, we will consider the forms of payoff:

$$\text{Payoff}=H(X_t)\mathbb{I}_{(\tau>t)},$$

where τ is a random moment of time during which there is a failure to make a payment of premium. Since we are interested in the derivatives estimation, we must determine the dynamics $(\mathrm{X},\mathrm{Y}_1,\dots,\mathrm{Y}_\mathrm{l},\mathrm{Z}_1,\dots,\mathrm{Z}_\mathrm{r})$, under the evaluation of the degree of neutral risk, which we denote as $\widetilde{\mathbb{P}}$. We have the following dynamics [7]:

$$\begin{aligned}
dX_t&=\big(b(X_t)-a(X_t)f(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{r}t})\Omega(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{r}t})\big)dt\\
&\quad+a(X_t)f(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{r}t})d\widetilde{W}_t^x,\\
dY_{jt}&=\left(\frac{1}{\epsilon_j}\alpha_j(Y_{jt})-\frac{1}{\sqrt{\epsilon_j}}\beta_j(Y_{jt})\Lambda_j(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{r}t})\right)dt+\frac{1}{\sqrt{\epsilon_j}}\beta_j(Y_{jt})d\widetilde{W}_t^{y_j},\\
dZ_{it}&=\left(\delta_ic_i(Z_{it})-\sqrt{\delta_i}g_i(Z_{it})\Gamma_i(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{r}t})\right)dt+\sqrt{\delta_i}g_i(Z_{it})d\widetilde{W}_t^{z_i},\\
&d\langle\widetilde{W}^x,\widetilde{W}^{y_j}\rangle_t=\rho_{xy_j}dt,\ j=\overline{1,l}.\\
&d\langle\widetilde{W}^x,\widetilde{W}^{z_i}\rangle_t=\rho_{xz_i}dt,\ i=\overline{1,r}\\
&d\langle\widetilde{W}^{y_j},\widetilde{W}^{z_i}\rangle_t=\rho_{y_jz_i}dt,\ j=\overline{1,l},\ \ i=\overline{1,r}.\\
&d\langle\widetilde{W}^{y_j},\widetilde{W}^{y_s}\rangle_t=\rho_{y_jy_s}dt,\ j=\overline{1,l},\ \ s=\overline{1,l}.\\
&d\langle\widetilde{W}^{z_i},\widetilde{W}^{z_k}\rangle_t=\rho_{z_iz_k}dt,\ i=\overline{1,n},\ \ k=\overline{1,n}.\\
&(X_0,\mathrm{Y}_{10},\dots,\mathrm{Y}_{\mathrm{l}0},\mathrm{Z}_{10},\dots,\mathrm{Z}_{\mathrm{r}0})=(x,y_{10},\dots y_{l0},z_{10},\dots,z_{r0})\in E,
\end{aligned}\tag{1}$$

where

$$\begin{aligned}
d\widetilde{W}_t^x&:=dW_t^x+\left(\frac{v(X_t)-b(X_t)}{a(X_t)f(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{n}t})}+\Omega(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{r}t})\right)dt,\\
d\widetilde{W}_t^{y_j}&:=dW_t^{y_j}+\Lambda_j(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{r}t})dt,\\
d\widetilde{W}_t^{z_i}&:=dW_t^{z_i}+\Gamma_i(\mathrm{Y}_{1t},\dots,\mathrm{Y}_{\mathrm{l}t},\mathrm{Z}_{1t},\dots,\mathrm{Z}_{\mathrm{r}t})dt,
\end{aligned}$$

where $\rho_{y_j y_s} = 0,\ j \neq s,\ \rho_{z_i z_k} = 0,\ i \neq k$.

We establish such conditions so that the system (1) has the only strong solution.

Random time τ is the time of the derivative asset. In our case, default can occur in one of two ways:

1) when X fall outside the interval I,
2) at random time τ_h, which is managed by the risk level $h(X_t) \geq 0$.

This can be expressed as follows:

$$\tau = \tau_I \wedge \tau_h,$$
$$\tau_I = inf\{t \geq 0: X_t \notin I\},$$
$$\tau_h = inf\left\{t \geq 0: \int_0^t h(X_s)ds \geq \varepsilon(X, \mathrm{Y}_1, \dots, \mathrm{Y}_l, \mathrm{Z}_1, \dots, \mathrm{Z}_n)\right\},$$
$$\varepsilon \sim Exp(1) \perp\!\!\!\perp.$$

Note that the random variable ε is independent of $(X, \mathrm{Y}_1, \dots, \mathrm{Y}_l, \mathrm{Z}_1, \dots, \mathrm{Z}_n)$.

To track τ_h, we use the process indicator: $D_t = \mathbb{I}_{\{t \geq \tau_h\}}$, where $\mathbb{D} = \{\mathfrak{D}_t, t \geq 0\}$, is a filter generated by D and $\mathbb{F} = \{\mathfrak{F}_t, t \geq 0\}$ is filter's generator $(W^x, W^{y_1}, \dots W^{y_l}, W^{z_1}, \dots, W^{z_n})$. We use the filtering $\mathbb{G} = \{\mathfrak{G}_t, t \geq 0\}$, where $\mathfrak{G}_t = \mathfrak{F}_t \vee \mathfrak{D}_t$. Note that $(X, \mathrm{Y}_1, \dots, \mathrm{Y}_l, \mathrm{Z}_1, \dots, \mathrm{Z}_n)$ are applied to $\mathbb{G}$ and τ is a stopping time $(\{\{\tau \leq t\}\} \in \mathfrak{G}_t$ for all $t \geq 0)$.

We will evaluate the derivative asset of some payoff (payment) using the neutral pricing risk and Markovian chain X, the price $u^{\overline{\epsilon}, \overline{\delta'}}(t, x, y_1, \dots y_l, z_1, \dots, z_r)$ of some derivative assets at the initial moment of time has the form:

$$u^{\overline{\epsilon}, \overline{\delta'}}(t, x, y_1, \dots y_l, z_1, \dots, z_r) = \widetilde{\mathbb{E}}_{x, y_1, \dots y_l, z_1, \dots, z_r}\left[exp\left(-\int_0^t r(X_s)ds\right)H(X_t \mathbb{I}_{\{t > \tau\}})\right],$$

where $\overline{\epsilon} = (\epsilon_1, \dots, \epsilon_l)$, $\overline{\delta'} = (\delta_1, \dots, \delta_r)$, and $(x, y_1, \dots y_l, z_1, \dots, z_r) \in E$ is a starting point of the process $(X, \mathrm{Y}_1, \dots, \mathrm{Y}_l, \mathrm{Z}_1, \dots, \mathrm{Z}_r)$. By Feynmann-Kac formulas, we can show that $u^{\overline{\epsilon}, \overline{\delta'}}(t, x, y_1, \dots y_l, z_1, \dots, z_r)$ satisfies the following Cauchy problem [3]:

$$\left(-\partial_t + \mathfrak{L}^{\overline{\epsilon}, \overline{\delta'}}\right)u^{\overline{\epsilon}, \overline{\delta'}} = 0, \quad (y_1, \dots y_l, z_1, \dots, z_r) \in E, t \in \mathbb{R}^+, \tag{2}$$
$$u^{\overline{\epsilon}, \overline{\delta'}}(0, x, y_1, \dots y_l, z_1, \dots, z_r) = H(x), \tag{3}$$

where the operator $\mathfrak{L}^{\overline{\epsilon}, \overline{\delta'}}$ has the form:

$$\mathfrak{L}^{\overline{\epsilon}, \overline{\delta'}} = \sum_{j=1}^{l} \frac{1}{\epsilon_j}\mathfrak{L}_{0j} + \sum_{j=1}^{l} \frac{1}{\sqrt{\epsilon_j}}\mathfrak{L}_{1j} + \mathfrak{L}_{2j} + \sum_{i,j} \sqrt{\frac{\delta_i}{\epsilon_j}}\mathfrak{M}_{3ij} + \sum_i \sqrt{\delta_i}\mathfrak{M}_{1i} + \sum_i \delta_i \mathfrak{M}_{2i},$$
$$\mathfrak{L}_{0j} = \frac{1}{2}\beta_j^2(y_j)\partial^2_{y_j y_j} + \alpha_j(y_j)\partial_{y_j}, \qquad j = \overline{1, l}.$$
$$\mathfrak{L}_{1j} = \beta_j(y_j)(\rho_{xy_j} a(x) f(y_1, \dots y_l, z_1, \dots, z_r)\partial_x - \Lambda_j(y_1, \dots y_l, z_1, \dots, z_r))\partial_{y_j},$$
$$\mathfrak{L}_{2j} = \frac{1}{2}a^2(x) f^2(y_1, \dots y_l, z_1, \dots, z_r)\partial^2_{xx} + (b(x) - a(x)\Omega(y_1, \dots y_l, z_1, \dots, z_r) f(y_1, \dots y_l, z_1, \dots, z_r))\partial_x - k(x),$$
$$\mathfrak{M}_{3ij} = \rho_{xz_i}\beta_j(y_j) g_i(z_i)\partial^2_{y_j z_i},$$
$$\mathfrak{M}_{1i} = g_i(z_i)\left(\rho_{xz_i} a(x) f(y_1, \dots y_l, z_1, \dots, z_r)\partial_x - \Gamma_i(y_1, \dots y_l, z_1, \dots, z_r)\right)\partial_{z_i},$$
$$\mathfrak{M}_{2i} = \frac{1}{2}g_i^2(z_i)\partial^2_{z_i z_i} + c_i(z_i)\partial_{z_i}, \quad k(x) = r(x) + h(x), \quad \mathfrak{L}_{0j} = \mathfrak{L}^1_{Y_j}.$$

We assume that the diffusion with the infinitesimal generator $\mathfrak{L}^1_{Y_j}$ has an invariant distribution Π with density $\pi_j(y_j)$.

$$\pi_j(y_j) = \frac{2}{\beta_j^2(y_j)}\exp\left\{\int_{y_{j0}}^{y_j} \frac{2\alpha_j(\theta)}{\beta_j^2(\theta)}d\theta\right\}, \quad \forall j = \overline{1, l}.$$

Besides the initial condition (3), the function $u^{\overline{\epsilon}, \overline{\delta'}}(t, x, y_1, \dots y_l, z_1, \dots, z_r)$ must meet boundary conditions at the points of e_1 and e_2 of the interval I. The boundary conditions at points e_1 and e_2

belong to the domain $\mathfrak{L}^{\bar{\epsilon},\overline{\delta'}}$ and will depend on the nature of process X on the points of I and are classified as natural, output, input or regular [1]. The Cauchy problem (2)-(3) for $(f, \alpha_1, \dots \alpha_l, \beta_1, \dots, \beta_r, \Lambda_1, \dots \Lambda_l, c_1, \dots, c_r, g_1, \dots g_r, \Gamma_1, \dots, \Gamma_r)$ has no analytical solution. However, for fixed $\overline{\delta'}$, the conditions containing $\bar{\epsilon}$ and are arbitrarily deviated in the $\bar{\epsilon}$-axis, which causes singular perturbations. For a fixed ϵ_j condition containing δ_i are small for some small $\overline{\delta'}$-axis, which causes regular perturbations. Thus, the $\bar{\epsilon}$-axis and $\overline{\delta'}$-axis yields the combined singular-regular perturbation of $\mathcal{O}(1)$ of the operator $\mathfrak{L}_2$.To find the asymptotic solution of the Cauchy problem (2)–(3), we develop $u^{\bar{\epsilon},\overline{\delta'}}$ in orders $\sqrt{\epsilon_j}$ and $\sqrt{\delta_i}$ [2]:

$$u^{\bar{\epsilon},\overline{\delta'}} = \sum_{i_1 \geq 0} \dots \sum_{i_l \geq 0} \sum_{j_1 \geq 0} \dots \sum_{j_r \geq 0} \sqrt{\epsilon_1}^{j_1} \dots \sqrt{\epsilon_l}^{j_l} \sqrt{\delta_1}^{i_1} \dots \sqrt{\delta_r}^{i_r} u_{j_1,\dots,j_n,i_1,\dots i_l},$$

where $\sum_{i_1 \geq 0} \dots \sum_{i_l \geq 0} \sum_{j_1 \geq 0} \dots \sum_{j_r \geq 0} \sqrt{\epsilon_1}^{j_1} \dots \sqrt{\epsilon_l}^{j_l} \sqrt{\delta_1}^{i_1} \dots \sqrt{\delta_r}^{i_r} u_{j_1,\dots,j_r,i_1,\dots i_l} =$

$$\lim_{i \to \infty} \sum_{i_1 \geq 0}^{m_1} \dots \sum_{i_l \geq 0}^{m_l \geq 0} \sum_{j_1 \geq 0}^{m_{l+1} \geq 0} \dots \sum_{j_n \geq 0}^{m_{l+r}} \sqrt{\epsilon_1}^{j_1} \dots \sqrt{\epsilon_l}^{j_l} \sqrt{\delta_1}^{i_1} \dots \sqrt{\delta_r}^{i_r} u_{j_1,\dots,j_r,i_1,\dots i_l}, \quad m_1 \to \infty, \dots, m_{l+r} \to \infty .$$

The approximate price is calculated

$$u^{\bar{\epsilon},\overline{\delta'}} \approx u_{\bar{0},\overline{0'}} + \sum_{j=1}^{l} \sqrt{\epsilon_j} u_{\bar{1}_j,\overline{0'}} + \sum_{i=1}^{r} \sqrt{\delta_i} u_{\bar{0},\overline{1'_i}}.$$

The choice of development in half-integer orders ϵ_j and δ_i are natural for $\mathfrak{L}^{\bar{\epsilon},\overline{\delta'}}$.

By conducting an analysis of singular perturbations at the corresponding levels, we obtain that $u_{\bar{0},\overline{0'}}$, $u_{\bar{1}_j,\overline{0'}}$, $u_{\bar{0},\overline{1'_i}}$ do not depend on $y_1, \dots y_l$. The basic findings of the asymptotic analysis are given using the following formulas [4]

$$\mathcal{O}(1){:}\ \sum_{j=1} \mathfrak{L}_{0j} u_{\bar{2}_j,\overline{0'}} + (-\partial_t + \langle \mathfrak{L}_2 \rangle) u_{\bar{0},\overline{0'}} = 0,\ u_{\bar{0},\overline{0'}}(0, x, z_1, \dots, z_r) = H(x), \tag{4}$$

$$\begin{gathered} \mathcal{O}(\sqrt{\epsilon_j}){:}\ \mathfrak{L}_{0j} u_{\bar{3}_j,\overline{0'}} + \mathfrak{L}_{1j} u_{\bar{2}_j,\overline{0'}} + (-\partial_t + \langle \mathfrak{L}_2 \rangle) u_{\bar{1}_j,\overline{0'}} + \sum_{k \neq j} \mathfrak{L}_{1k} u_{\bar{1}_{kj},\overline{0'}} + \sum_{i \neq j} \mathfrak{L}_{1i} \\ = \mathcal{A}_j u_{\bar{0},\overline{0'}},\quad u_{\bar{1}_j,\overline{0'}}(0, x, z_1, \dots, z_n) = 0, \\ \bar{1}_{kj} = \left(\underbrace{0, \dots 1}_{k}\ \underbrace{0,1,0, \dots .0}_{j} \right). \end{gathered} \tag{5}$$

According to the analysis of regular perturbations we have

$$\mathcal{O}(\sqrt{\delta_i}){:}\ (-\partial_t + \langle \mathfrak{L}_2 \rangle) u_{\bar{0},\overline{1'_i}} = \mathcal{B}_i \partial_{z_i} u_{\bar{0},\overline{0'}},\ u_{\bar{0},\overline{1'_i}}(0, x, z_1, \dots, z_r) = 0,\ i = \overline{1,r}. \tag{6}$$

Operators $\langle \mathfrak{L}_2 \rangle$, $\mathcal{A}_j$, $\mathcal{B}_i$ and ∂_{z_i} are defined by the formulas

$\langle \mathfrak{L}_2 \rangle = \frac{1}{2} \bar{\sigma}^2 a^2(x) \partial_{xx}^2 + \big(b(x) - \overline{f\Omega} a(x)\big) \partial_x - k(x), \quad x \in (e_1, e_2),$

$\mathcal{A}_j = -\nu_{3j} a(x) \partial_x a^2(x) \partial_{xx}^2 - \nu_{2j} a^2(x) \partial_{xx}^2 - \mathcal{U}_{2j} a(x) \partial_x a(x) \partial_x - \mathcal{U}_{1j} a(x) \partial_x ,$

$\mathcal{B}_i = -\nu_{1i} a(x) \partial_x - \nu_{0i}$ and $\partial_{z_i} = \partial_{z_i} \bar{\sigma} \partial_{\bar{\sigma}} + \overline{f\Omega}' \partial_{\overline{f\Omega}}$, $\nu_{1i} := g_i \rho_{xz_i} \langle f \rangle$, $\nu_0 = g_i \langle \Gamma_i \rangle$, $\forall\, i = \overline{1,n}$ and norm function

$\langle \mathcal{X} \rangle_j := \int \mathcal{X}(y_1, \dots y_l) \pi_j(y_j) dy_j, \quad \forall j = \overline{1,l},$

$\langle \mathcal{X} \rangle_{1,2} = \int_{R^2} \mathcal{X}(y_1, \dots y_l) \pi_1(y_1) \pi_2(y_2) dy_1 dy_2, \dots \langle \mathcal{X} \rangle_{l-1,l} =$

$\int_{R^l} \mathcal{X}(y_1, \dots y_l) \pi_1(y_1) \dots \pi_l(y_l) dy_1 \dots dy_l$, $\langle \mathcal{X} \rangle_{l-1,l} = \langle \mathcal{X} \rangle$, $\langle f\Omega \rangle := \overline{f\Omega}$, $\langle f^2 \rangle = \bar{\sigma}^2$.

We find solutions to the equations (4)-(6) on the basis of eigenfunctions, eigenvalues of the operator $\langle \mathfrak{L}_2 \rangle$, each of which meets a corresponding Poisson equation

$\mathfrak{L}_{01} \varphi_1 = f^2 - \langle f^2 \rangle_1$, $\mathfrak{L}_{02} \varphi_2 = \langle f^2 \rangle_1 - \langle f^2 \rangle_{1,2}, \dots, \mathfrak{L}_{0l} \varphi_l = \langle f^2 \rangle_{l-2,l-1} - \langle f^2 \rangle_{l-1,l}$,

$\mathfrak{L}_{01} \eta_1 = f\Omega - \langle f\Omega \rangle_1, \dots, \mathfrak{L}_{0j} \eta_j = \langle f\Omega \rangle_{j-2,j-1} - \langle f\Omega \rangle_{j-1,j}, \dots, \mathfrak{L}_{0l} \eta_l = \langle f\Omega \rangle_{l-2,l-1} - \langle f\Omega \rangle_{l-1,l}.$

Theorem 1: Assume that we can solve the following equation to find an eigenvalue:

$$-\langle\mathfrak{L}_2\rangle\psi_n = \lambda_n\psi_n, \qquad \psi_n \in dom(\langle\mathfrak{L}_2\rangle), \tag{7}$$

and also that $H \in \mathcal{H}$. Then the solution $u_{\overline{0},\overline{0'}}$ has the form:

$$u_{\overline{0},\overline{0'}} = \sum_{n=1}^{\infty} c_n\psi_n T_n\,, \qquad c_n = (\psi_n, H), \qquad T_n = e^{-t\lambda_n}.$$

Theorem 2: Let c_n, ψ_n, T_n be described using Theorem 1. We define

$$\mathcal{A}_{jk,n} := \left(\psi_k, \mathcal{A}_j\psi_n\right),\ U_{k,n} := \frac{T_k - T_n}{\lambda_k - \lambda_n}.$$

Then the solution $u_{\overline{1}_j,\overline{0'}}$ of equation (5) has the form:

$$u_{\overline{1}_j,\overline{0'}} = \textstyle\sum_n \sum_{k\neq n} c_n A_{jk,n}\,\psi_k U_{k,n} - \sum_n c_n \mathcal{A}_{jn,n}\psi_n t T_n.$$

Note that $u_{\overline{1}_j,\overline{0'}}$ is linear in the parameter group $(\vartheta_{3j}, \vartheta_{2j}, u_{2j}, u_{1j})$.

Theorem 3: Let c_n, ψ_n and T_n be defined with Theorem 1, and $U_{k,n}$ with Theorem 2, we have $\widetilde{\mathcal{B}}_{ik,n} := \left(\psi_k, \mathcal{B}_i\partial_{Z_i}\psi_n\right)$, $\mathcal{B}_{ik,n} := (\psi_k, \mathcal{B}_i\psi_n)$, $\quad V_{ik,n} := \frac{T_k - T_n}{(\lambda_k-\lambda_n)^2} + \frac{tT_n}{\lambda_k - \lambda_n}$.

Then the solution $u_{\overline{0},\overline{1'_i}}$ has the form:

$$\begin{aligned} u_{\overline{0},\overline{1'_i}} = &\sum_n\sum_{k\neq n} c_n\,\widetilde{\mathcal{B}}_{ik,n}\psi_k U_{ik,n} - \sum_n c_n\widetilde{\mathcal{B}}_{in,n}\psi_n t T_n \\ &+ \sum_n\sum_{k\neq n}(\partial_{Z_i}c_n)\,\mathcal{B}_{ik,n}\psi_k U_{ik,n} - \sum_n(\partial_{Z_i}c_n)\mathcal{B}_{in,n}\psi_n t T_n \\ &+ \sum_n\sum_{k\neq n} c_n\,\mathcal{B}_{ik,n}\psi_k(\partial_{Z_i}\lambda_n)V_{ik,n} - \sum_n c_n\mathcal{B}_{in,n}\psi_n(\partial_{Z_i}\lambda_n)\frac{1}{2}t^2 T_n. \end{aligned}$$

We draw attention to the fact that $u_{\overline{0},\overline{1'_i}}$ is linear in $(\nu_{1i}\bar{\sigma}', \nu_{1i}\overline{f\Omega'}, \nu_{0i}\bar{\sigma}', \nu_{0i}\overline{f\Omega'})$.

Having obtained the approximate solution $u^{\bar{\epsilon},\overline{\delta'}} \approx u_{\overline{0},\overline{0'}} + \sum_{j=1}^{l}\sqrt{\epsilon_j}u_{\overline{1}_j,\overline{0'}} + \sum_{i=1}^{n}\sqrt{\delta_i}u_{\overline{0},\overline{1'_i}}$ for the derivative asset pricing.

4. Results and Discussion

For a more exact result we assume that the Payoff function $H(x)$ and its derivative are smooth and limited functions. Thus, we limit our derivative analysis to a smooth and limited payoff; in this case, the closeness estimates is based on the following theorem:

Theorem 4: For the fixed $(t, x, y_1, \dots, y_l, z_1, \dots, z_r)$ there exists an invariable C such that for any $\epsilon_j \leq 1$, $\delta_i \leq 1$ we have:

$$\left|u^{\bar{\epsilon},\overline{\delta'}} - \left(u_{\overline{0},\overline{0'}} + \textstyle\sum_{j=1}^{l}\sqrt{\epsilon_j}u_{\overline{1}_j,\overline{0'}} + \sum_{i=1}^{n}\sqrt{\delta_i}u_{\overline{0},\overline{1'_i}}\right)\right| \leq C\left(\textstyle\sum_{j=1}^{l}\epsilon_j + \sum_{i=1}^{r}\delta_i\right).$$

Theorem 4 gives us information on how the approximate price behaves when $\epsilon_j \to 0$ and $\delta_i \to 0$.

Let X be short interest rates. One of the most widely known models of short interest rates is the Vasicek model, in which X is modeled as the Ornshtein-Ulenbeek process with multidimensional stochastic volatility. $\mathbb{P}$ dynamics of X are given, in particular

$$\begin{aligned} dX_t = &\left(\kappa(\theta - X_t) - f(\mathrm{Y}_1, \dots, \mathrm{Y}_l, \mathrm{Z}_1, \dots, \mathrm{Z}_r)\Omega(\mathrm{Y}_1, \dots, \mathrm{Y}_l, \mathrm{Z}_1, \dots, \mathrm{Z}_r)\right)dt \\ &+ f(\mathrm{Y}_1, \dots, \mathrm{Y}_l, \mathrm{Z}_1, \dots, \mathrm{Z}_r) + d\widetilde{W}_t^x,\ r(X_t) = X_t,\ h(X_t) = 0, \end{aligned}$$

where $\mathrm{Y}_1, \dots, \mathrm{Y}_l$, and $\mathrm{Z}_1, \dots, \mathrm{Z}_r$ are fast and slowly variable volatility factors as described. We calculate the approximate price for a zero coupon bond.

We write the operator $\langle \mathfrak{L}_2 \rangle$ and the density associated with it at a rate $m(x)$

$$\begin{gathered}\langle \mathfrak{L}_2 \rangle = \tfrac{1}{2}\bar{\sigma}^2 \partial_{xx}^2 + \kappa(\bar{\theta} - x)\partial_x - x, \\ m(x) = \frac{2}{\bar{\sigma}^2} exp\left(\frac{-k}{\bar{\sigma}^2}(\bar{\theta} - x)^2\right), \qquad \bar{\theta} = \theta - \frac{1}{\kappa}\overline{f\Omega}, \\ m(x) = \frac{2}{\bar{\sigma}^2} exp\left(\frac{-k}{\bar{\sigma}^2}(\bar{\theta} - x)^2\right), \qquad \bar{\theta} = \theta - \frac{1}{\kappa}\overline{f\Omega}.\end{gathered} \tag{8}$$

To find a bond price with a payoff $H(X_t) = \mathbb{I}_{\{\tau > t\}} = 1$, we need to solve the equation (7) to find the eigenvalues for the segment $I = (-\infty, \infty)$ with $\langle \mathfrak{L}_2 \rangle$ in compliance with (8). Since both points ∞ and ∞ are natural limits, then the solution has the form [13].

$$\begin{gathered}\psi_n = \mathcal{N}_n \exp\left(-A\xi - \frac{1}{2}A^2\right) H_n(\xi + A), \\ \mathcal{N}_n = \left(\sqrt{\frac{\kappa}{\pi}} \frac{\bar{\sigma}}{2^{n+1} n!}\right)^{1/2}, \\ A = \frac{\bar{\sigma}}{\kappa^{3/2}}, \qquad \xi = \frac{\sqrt{\kappa}}{\bar{\sigma}}(x - \bar{\theta}), \\ \lambda_n = \lambda_n = \bar{\theta} - \frac{\bar{\sigma}^2}{2\kappa^2} + \kappa n, \quad n = 0,1,2, \ldots .\end{gathered}$$

Here, H_n are Hermite polynomials. We will write the expressions for the operators $\mathcal{A}_j$ and $\mathcal{B}_j$:

$$\mathcal{A}_j = -\vartheta_{j3}\partial_{xxx}^3 - (\vartheta_{j2} + \mathfrak{U}_{j2})\partial_{xx}^2 - \mathfrak{U}_{j1}\partial_x, \qquad \mathcal{B}_j = \vartheta_{j1}\partial_x - \vartheta_{j0}.$$

Operators $\mathcal{A}_{jk,n}, \mathcal{B}_{jk,n}$, and $\widetilde{\mathcal{B}}_{jk,n}$ are written on the basis of recurrence relations:

$$\begin{gathered}\partial_x H_n = 2nH_{n-1}, \qquad 2xH_n = H_{n+1} + \partial_x H_n, \qquad \mathcal{A}_{jk,n} = -\vartheta j_3 \\ \left\{\sum_{m=0}^{3\wedge n} \binom{3}{m} \left(\frac{-1}{\kappa}\right)^{3-m} \left(\frac{2\sqrt{\kappa}}{\bar{\sigma}}\right)^m \frac{n!\,\mathcal{N}_n}{(n-m)!\,\mathcal{N}_{n-m}} \delta_{k,n-m}\right\} \\ -(\vartheta_2 + \mathfrak{U}_{j2}) \\ \left\{\sum_{m=0}^{3\wedge n} \binom{2}{m} \left(\frac{-1}{\kappa}\right)^{2-m} \left(\frac{2\sqrt{\kappa}}{\bar{\sigma}}\right)^m \frac{n!\,\mathcal{N}_n}{(n-m)!\,\mathcal{N}_{n-m}} \delta_{k,n-m}\right\} \\ -\mathfrak{U}_{j1}\left\{\left(\frac{-1}{\kappa}\right)\delta_{k,n} + \left(\frac{2\sqrt{\kappa}}{\bar{\sigma}}\right)\frac{n!\,\mathcal{N}_n}{(n-1)!\,\mathcal{N}_{n-1}}\delta_{k,n-1}\right\}, \\ \mathcal{B}_{jk,n} = -\vartheta_1\left\{\left(\frac{-1}{\kappa}\right)\delta_{k,n} + \left(\frac{2\sqrt{\kappa}}{\bar{\sigma}}\right)\frac{n!\,\mathcal{N}_n}{(n-1)!\,\mathcal{N}_{n-1}}\delta_{k,n-1}\right\} - \vartheta_{j0}\delta_{k,n}, \\ \widetilde{\mathcal{B}}_{jk,n} = -\vartheta_{j1}\bar{\sigma}'^{\{[(\frac{-1}{\kappa})(\frac{1}{2\bar{\sigma}} - \frac{\bar{\sigma}}{\kappa^3} - \frac{n}{\bar{\sigma}})]\delta_{k,n}} + \left[\left(\frac{-1}{\kappa}\right)\left(\frac{4}{\kappa^{\frac{3}{2}}}\right) + \left(\frac{2\sqrt{\kappa}}{\bar{\sigma}}\right)\left(\frac{1}{2\bar{\sigma}} - \frac{\bar{\sigma}}{\kappa^3} - \frac{n}{\bar{\sigma}}\right)\right]\frac{n!\,\mathcal{N}_n}{(n-1)!\,\mathcal{N}_{n-1}}\delta_{k,n-1} \\ + \left[\left(\frac{-1}{\kappa}\right)\left(\frac{-2}{\bar{\sigma}}\right) + \left(\frac{2\sqrt{\kappa}}{\bar{\sigma}}\right)\left(\frac{4}{\kappa^{\frac{3}{2}}}\right)\right]\frac{n!\,\mathcal{N}_n}{(n-2)!\,\mathcal{N}_{n-2}}\delta_{k,n-2} + \left[\left(\frac{2\sqrt{\kappa}}{\bar{\sigma}}\right)\left(\frac{-2}{\bar{\sigma}}\right)\right]\frac{n!\,\mathcal{N}_n}{(n-3)!\,\mathcal{N}_{n-3}}\delta_{k,n-3}\Bigg\} \\ -\vartheta_{i0}\bar{\sigma}'\left\{\left(\frac{1}{2\bar{\sigma}} - \frac{\bar{\sigma}}{\kappa^3} - \frac{n}{\bar{\sigma}}\right)\delta_{k,n} + \left(\frac{4}{\kappa^{\frac{3}{2}}}\right)\frac{n!\,\mathcal{N}_n}{(n-1)!\,\mathcal{N}_{n-1}}\delta_{k,n-1} + \left(\frac{-2}{\bar{\sigma}}\right)\frac{n!\,\mathcal{N}_n}{(n-2)!\,\mathcal{N}_{n-2}}\delta_{k,n-2}\right\} \\ -\vartheta_{i1}\overline{f\Omega}'\left\{\left(\frac{1}{\kappa^3}\right)\delta_{k,n} + \left(\frac{-4}{\bar{\sigma}\kappa^{\frac{3}{2}}}\right)\frac{n!\,\mathcal{N}_n}{(n-1)!\,\mathcal{N}_{n-1}}\delta_{k,n-1} + \left(\frac{4}{\bar{\sigma}^2}\right)\frac{n!\,\mathcal{N}_n}{(n-2)!\,\mathcal{N}_{n-2}}\delta_{k,n-2}\right\} \\ -\vartheta_{i0}\overline{f\Omega}'\left\{\left(\frac{-1}{\kappa^2}\right)\delta_{k,n} + \left(\frac{2}{\bar{\sigma}\sqrt{\kappa}}\right)\frac{n!\,\mathcal{N}_n}{(n-1)!\,\mathcal{N}_{n-1}}\delta_{k,n-1}\right\}.\end{gathered}$$

Calculation of c_n can be found in [12]

$$c_n = (\psi_n, 1) = \frac{2}{\bar{\sigma}}\sqrt{\frac{\pi}{\kappa}}\mathcal{N}_n A^n e^{-A^2/4}.$$

The approximate price of a bond can now be calculated applying the theorems 1-3.

For zero-coupon bonds, the bond curve is often considered, and not the bond price itself. The yield $R^{\overline{\epsilon},\overline{\delta'}}$ for a zero-coupon bond, on which one dollar is paid at time t is defined by the relation:

$$u^{\overline{\epsilon},\overline{\delta'}} = \exp\left(-R^{\overline{\epsilon},\overline{\delta'}}t\right).$$

We obtain the approximation for a zero-coupon bond, developing in series as bond prices $u^{\overline{\epsilon},\overline{\delta'}}$, and the yield $R^{\overline{\epsilon},\overline{\delta'}}$ in orders $\sqrt{\epsilon_j}$ and $\sqrt{\delta_i}$:

$$u_{\overline{0},\overline{0'}} + \sum_{j=1}^{l}\sqrt{\epsilon_j}u_{\overline{1_j},\overline{0'}} + \sum_{i=1}^{r}\sqrt{\delta_i}u_{\overline{0},\overline{1'_i}} + \cdots = e^{-\left(R_{\overline{0},\overline{0'}} + \sum_{j=1}^{l}\sqrt{\epsilon_j}R_{\overline{1_j},\overline{0'}} + \sum_{i=1}^{n}\sqrt{\delta_i}R_{\overline{0},\overline{1'_i}}\right)t}$$

$$= e^{-R_{\overline{0},\overline{0'}}t} + \sum_{j=1}^{l}\sqrt{\epsilon_j}R_{\overline{1_j},\overline{0'}}\,e^{-R_{\overline{0},\overline{0'}}t} + \sum_{i=1}^{r}\sqrt{\delta_i}R_{\overline{0},\overline{1'_i}}\,e^{-R_{\overline{0},\overline{0'}}t} + \cdots.$$

Grouping in orders $\sqrt{\epsilon_j}$ and $\sqrt{\delta_i}$ we obtain:

$$R^{\overline{\epsilon},\overline{\delta'}} \approx R_{\overline{0},\overline{0'}} + \sum_{j=1}^{l}\sqrt{\epsilon_j}R_{\overline{1_j},\overline{0'}} + \sum_{i=1}^{r}\sqrt{\delta_i}R_{\overline{0},\overline{1'_i}},$$

$$R_{\overline{0},\overline{0'}} = -\frac{1}{t}\ln(u_{\overline{0},\overline{0'}})\,,\quad R_{\overline{1_j},\overline{0'}} = \frac{-u_{\overline{1_j},\overline{0'}}}{tu_{\overline{0},\overline{0'}}},\quad R_{\overline{0},\overline{1'_i}} = \frac{-u_{\overline{0},\overline{1'_i}}}{tu_{\overline{0},\overline{0'}}}.$$

Note that figures are constructed component-wise on each corresponding time scale, in much the same way as components in [2], [11].

5. Conclusions

The spectral theory and the theory of singular and regular perturbations are applied to investigate the short-term interest rates described by the Vasicek model. The approximate price of bonds and their yield are calculated. Applying the Sturm-Liouville theory, Fredholm's alternatives, as well as analysing singular and regular perturbations in different time scales, we obtained explicit formulas for the convergence of bond prices and yields. To obtain explicit formulas, we need to solve 2l Poisson equations. The main advantage of our pricing methodology is that by combining methods from spectral theory, regular perturbation theory, and the theory of singular perturbations we reduce everything to the solution of the equations to find their eigenfunctions and eigenvalues.

Developed methodology for modeling the pricing of derivatives, makes it possible to predict the results of targeted actions of stock market participants, and to correct behavior based on the influence of various factors present in the market.

References

[1] Borodin A., Salminen, P. *Handbook of Brownian motion: facts and formulae*. Birkhauser, 2002.

[2] Burtnyak I.V., Malytska A.P. CEV Model with Stochastic Volatility. *Journal of Vasyl Stefanyk Precarpathian National University*, **6** (3-4) (2019), 22–28. doi: 10.15330/jpnu.6.3-4.22-28

[3] Malytska H., Burtnyak I. Construction of the fundamental solution of a class of degenerate parabolic equations of high order. *Carpathian Math. Publ.*, **12** (1) (2020), 79–87. doi:10.15330/cmp.12.1.79-87

[4] Burtnyak I.V., Malytska H.P. Degenerate parabolic systems of the diffusion type with inertia. *Journal of Mathematical Sciences*, **249** (3) (2020). doi: 10.1007/s10958-020-04947-2

[5] Cox J.C., Ingersoll J.E., Ross S.A. A theory of the term structure of interest rates. *Econometrica*, **53** (2) (1985), 385—408.

[6] Going-Jaeschke A., Yor M. A survey and some generalizations of Bessel processes. *Bernoulli,* **9** (2) (2003), 313–349. doi: 10.2307/3318942

[7] Gorovoi V., Linetsky V. Black's model of interest rates as options, eigenfunction expansions and Japanese interest rates. *Mathematical finance*, **14** (1) 2004, 49–78. doi: 10.1111/j.0960-1627.2004.00181.x

[8] Ho T.S.Y., Lee S. Term Structure Movements and Pricing Interest Rate Contingent Claims. *The Journal of Finance*, **41** (5) (1986), 1011—1029. doi: 10.1111/j.1540-6261.1986.tb02528.x

[9] Hull J., White A. The pricing of options on assets with stochastic volatilities. *The Journal of Finance*, **42** (2) (1987), 281–300. doi: 10.1111/j.1540-6261.1987.tb02568.x

[10] Linetsky V. The spectral decomposition of the option value. *International Journal of Theoretical and Applied Finance*, **7** (3) (2004), 337–384. doi: 10.1142/S0219024904002451

[11] Lorig M.J. Pricing Derivatives on Multiscale Diffusions: an Eigenfunction Expansion Approach. *Mathematical Finance*, **24** (2) (2014), 331–363. doi: 10.1111/mafi.12007

[12] Merton R.C. Theory of Rational Option Pricing. *Bell Journal of Economics and Management Science*, **4** (1) (1973), 141—183.

[13] Vasicek O. An equilibrium characterization of the term structure. *Journal of Financial Economics*, **5** (2) (1977), 177–188.

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Буртняк Іван, Малицька Ганна. Моделювання ціноутворення деривативів методами спектрального аналізу. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 128–136.

У цій статті розширюється метод знаходження наближеної ціни для широкого класу похідних фінансових інструментів. Використовуючи спектральну теорію самоспряжених операторів у Гільбертовому просторі та хвильову теорію сингулярних та регулярних збурень, встановлено аналітичну формулу наближеної ціни активів. Розроблено методи розрахунку цін опціонів за допомогою інструментів спектрального аналізу, теорії сингулярних та регулярних хвиль у випадку швидких і повільних факторів. Поєднуючи методи із спектральної теорії сингулярних та регулярних збурень, можна знайти ціну похідних фінансових інструментів як розклад за власними функціями. Розраховується приблизна вартість цінних паперів та їх норма прибутку. Застосовуючи теорію Штурма-Ліувілля, альтернативу Фредгольма та аналіз сингулярних та регулярних збурень у різних часових масштабах можна отримати явні формули вартості цінних паперів та їх дохідності на основі розкладу власних функцій та власних значень самоспряжених операторів, що використовують крайові задачі для сингулярних та регулярних збурень. Доведено теорему, за допомогою якої знаходяться оцінки наближеної ціни деривативів. Розроблено алгоритм обчислення наближеної ціни деривативів і точності оцінок, що дозволяє проводити аналіз та зробити запобіжні висновки і пропозиції, щоб мінімізувати ризики щодо ціноутворення деривативів, які виникають на фондовому ринку. Розроблено модель знаходження величини ціни деривативів, що відповідають динаміці фондового ринку та величини фінансових потоків. Така модель дозволяє знаходити ціни деривативів та їхню волатильність, а також звести до мінімуму спекулятивні зміни в ціноутворенні, здійснювати аналіз проходження процесів на фондовому ринку та робити конкретні кроки для покращення ситуації щодо оптимізації фінансових стратегій. Використана методика ціноутворення європейських опціонів на основі дослідження поведінки волатильності та аналізу дохідності фінансових інструментів дозволяє збільшити точність прогнозу та приймати обґрунтовані управлінські стратегічні рішення учасниками фондового ринку.

Ключові слова: фондовий ринок, деривативи, спектральний аналіз, спектральна теорія, сингулярна теорія збурень, регулярна теорія збурень.

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MODELLING OF THE STRATEGIC PLANNING PROCESS AT AN AGRICULTURAL ENTERPRISE

IRYNA BORYSHKEVYCH, ALEKSANDER IWASZCZUK

Abstract. The development strategy is a long-term roadmap of the company's activities, which makes it possible to achieve higher performance in relation to competitors. Almost all managers of agricultural enterprises in the process of strategic management face a number of problems, such as the choice of appropriate tools for strategic analysis and methods for building a strategy. This is based on the fact that different agricultural enterprises have different existing capabilities, available resources and strategic planning needs. Depending on the strategic ability of agricultural enterprises, it is proposed to use various tools of strategic analysis and methods of strategy development. Based on the conducted research, there was formed a mechanism for implementing strategic planning at an agricultural enterprise. It consists of three stages. The developed mechanism was tested at a private agricultural enterprise 'Ridna Zemlia' (Native Land) with the typical main indicators of economic activity in the Ivano-Frankivsk region. At the first stage, using a balanced system of economic indicators, it was found that this enterprise has an average level of strategic ability. Following the recommended strategic analysis tools, at the second stage of strategic planning, SWOT analysis of an agricultural enterprise was conducted identifying its strengths and weaknesses, existing opportunities and threats. At the third stage, a roadmap for implementing the strategy was developed within the framework of using the road mapping method, which is allowed by the appropriate level of strategic capability. The main strategic goal of the developed strategy is to ensure sustainable profits in the long term by increasing the productivity and efficiency of agricultural production. Based on this, the following strategic tasks were proposed to implement: the introduction of a new technology, which consists of constant monitoring of the herd of cows, opening of a new farm to expand the existing market and increase production volumes, the construction of a pellet boiler farm using biofuels, as well as the formation of a personnel training plan and the development and implementation of training programs for employee development.

Keywords: strategy, method, agricultural enterprise, strategic planning, roadmap.

JEL Classification: A11, D23, M10.

1. INTRODUCTION

In the modern business environment, the management of most agricultural enterprises begins to realize the need for strategic planning, formation and implementation of further development strategies and tries to use the existing methodological tools in their activities. At the same time, the process of strategic planning has not found a systematic reflection in practice. The vast majority of agricultural enterprises carry out strategic planning chaotically without having a clear developed model and effective mechanism. In addition, different agricultural enterprises have different available opportunities and resources to analyse and develop a development strategy. That is why it is important to form a clear mechanism for implementing strategic planning with an indication of specific stages and test the results received at one of the agricultural enterprises.

2. THEORETICAL BACKGROUND

A strategy is one of the most important concepts of the modern age [1], which determines the effectiveness of achieving the company's goals [2]. Strategic planning is a deliberate and disciplined effort aimed at making fundamental decisions and actions that determine what an organization is, what it does, and why [3]. Strategic planning is an analysis that involves dividing the goals set into steps that are manageable and implemented in order to achieve the desired aim [4]. Thus, strategic planning is a process that outlines the goals and objectives of the enterprise, formulates actions and allocates resources that will be used to achieve the set goals.

The problems and prospects of using strategic planning in the activities of agricultural enterprises are studied by scientists from different countries, in particular: J. Jaworski, K. Sokołowska, T. Kondraszuk [5], J. Dyczkowska, T. Dyczkowski [6] (Poland), H. Chladkova, S. Formankova [7] (the Czech Republic), J. Schindler, F. Graef, H. König [8] (Germany), C.-C. Chen, H.-P. Yueh, C. Liang [9] (China), S. Suriyankietkaew, P. Petison [10] (Thailand), R. Kalaki, M. Neves [11] (Brazil). Taking into account the peculiarities of the development of agricultural enterprises, scientists offer various ways to solve existing problems. However, most of them focus on the fact that strategic management is important for the successful development of the agricultural sector.

Studying the strategic directions of agricultural enterprises development scientists use various tools of strategic analysis and methods of building strategies: PEST analysis [12; 13], PESTEL analysis [14], SWOT analysis [15-17], roadmap method [18; 19], Hoshin Kanri method[20].

Summarizing the available scientific research in the field of strategic planning for the development of agricultural enterprises, we come to conclusion that modern agribusiness requires strategic thinking among enterprise managers, which results in the formation of a clear development strategy. The use of various tools of strategic analysis and methods of building a strategy will ensure the development of a strategic plan according to the capabilities of the enterprise. The development strategy of an agricultural enterprise makes it possible to clearly define the goals, ensures the readiness of the enterprise for changes in unstable external conditions and allows to gain competitive advantages in the market.

3. RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The purpose of this article is to model the process of strategic planning at an agricultural enterprise and develop a strategy for its further development. Having a developed strategy makes it possible to achieve clearly defined goals, which include improving the availability of the enterprise resources, expanding partnerships, improving the management system, rising the number of consumers, which ultimately increases the profitability and financial independence of the enterprise. Strategic planning at an agricultural enterprise involves implementation of three main stages (Fig. 1).

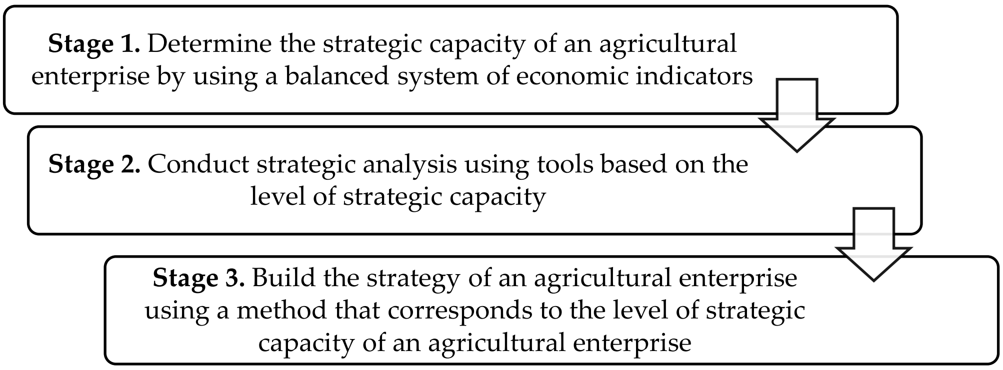

Fig.1. Implementation stages of strategic planning at an agricultural enterprise. Source: author's development.

At the first stage, it is necessary to establish the level of strategic ability of an agricultural enterprise using a balanced system of economic indicators, based on their economic efficiency. This system is based on calculating the land usage, financial, labour, material and technical resources utilized by an agricultural enterprise. Having defined the integral group indicator for each direction of the economic indicators in the balanced system, we can build a line diagram that will allow us to visually represent and compare the rate of resources utilization. This, in turn, will make it possible to improve the activities of those areas where the situation is the worst. The next step of this stage is to calculate the overall integral indicator, which determines the level of strategic ability of an agricultural enterprise (Table 1).

Overall value of integral indicator in the balanced system of economic indicators	**Type of agricultural enterprise**
from 0 to 0,35	Enterprises with a low level of strategic capacity
from 0,36 to 0,70	Enterprises with an average level of strategic capacity
from 0,71 to 1	Enterprises with a high level of strategic capacity

Tab. 1. Scale for evaluating the strategic capacity of agricultural enterprises. Source: [21].

At the second stage, we should carry out a strategic analysis, and at the third stage, we should build a strategy using appropriate tools and methods, which are based on the level of strategic capability of agricultural enterprises (Table 2).

Type of agricultural enterprises	**Strategic analysis tools**	**Methods for building a strategy**
Enterprises with a low level of strategic capacity	SWOT analysis	Objectives Tree method
Enterprises with an average level of strategic capacity	PEST analysis, SWOT analysis, Ansoff Matrix, Porter's Five Forces analysis, creating strategic groups map	Roadmapping (building a roadmap), Balanced Scorecard method
Enterprises with a high level of strategic capacity	STEEPLE analysis, TELESCOPIC OBSERVATIONS, ADL model, McKinsey Matrix	Hoshin Kanri method

Tab. 2 Classification of strategic analysis tools and building strategy methods depending on the strategic capability of an agricultural enterprise. Source: [21].

Having a developed strategy makes it possible to achieve clearly defined goals, including improving the resource availability of the enterprise, expanding partnerships, improving the management system, rising the number of consumers, which ultimately increases the profitability and financial independence of the enterprise.

4. Results and Discussion

The developed strategic planning mechanism was tested at a private agricultural enterprise 'Ridna Zemlia' (Native Land) specializing in the cultivation of grain crops (except rice), legumes and oilseeds. This enterprise is typical in terms of the main indicators of economic activity in the Ivano-Frankivsk region.

At the first stage of strategic planning, we determined the level of strategic capacity of the agricultural enterprise using a balanced system of economic indicators. Calculations were made on the basis of the financial report of the 'Ridna Zemlia' (Native Land) enterprise.

The results of calculations of the economic indicators balanced system are shown in Table 3.

Direction	Indicator name	Indicator value	
		Normative	Calculated
Use of land resources	Gross output production per 100 ha of land	growth	0,3125
Use of financial resources	Absolute liquidity ratio	more than 0,1	0,0198
	Total liquidity ratio	more than 1	2,7502
	Long-term debt ratio	less than 1	1,5179
	Return on equity (ROE)	not less than 1 %	13,8139 %
	Return on assets (ROA)	most suitable 10-20 %	5,1208 %
Use of labour resources	Productivity factor	growth	0,8921
	Return on learning (ROL)	growth	0,4846
	Turnover rate of personnel	reduction	0,1
Use of material and technical resources	Current asset turnover ratio	growth	0,9341
	Inventory turnover ratio	3-6	1,9057
	Inventory return ratio	growth	0,1568

Tab. 3 Private agricultural enterprise 'Ridna Zemlia' analysis results based on the economic indicators balanced system. Source: author's research.

In the next step, we calculated integral resource efficiency indicators, taking into account the weight of the impact of each group of indicators.

Since the influence of the land-use efficiency on the development of the agricultural enterprise is 0.365, the land-use efficiency integral indicator is:

Land-use efficiency integral indicator = 0,3125 × 0,365 = 0,1141.

The influence of the financial resources efficiency use is 0.2. thus, the integral indicator of the efficiency of financial resources use is as follows:

Financial resources use efficiency integral indicator =

$$\sqrt[5]{0{,}0198 \times 2{,}7502 \times 1/1{,}5179 \times 13{,}8139\% \times 5{,}1208\%} \times 0{,}2 = 0{,}0381.$$

The influence of the labour resource efficiency is 0.225. The integral indicator of labour resource efficiency is equal to:

Labour resource use efficiency indicator = $\sqrt[3]{0{,}8921 \times 0{,}4846 \times 1/0{,}1} \times 0{,}225 = 0{,}3665.$

Since the influence of the efficiency of material and technical resources use on the development of an agricultural enterprise is 0.21, the integral indicator of the use of material and technical resources is:

Material and technical resources use integral indicator = $\sqrt[3]{0{,}9341 \times 1{,}9057 \times 0{,}1568} \times 0{,}21 = 0{,}1372.$

Based on the results of the obtained integral indicators of resource utilization, we constructed the integrated values line diagram of the components of the economic indicators balanced system (Fig. 2).

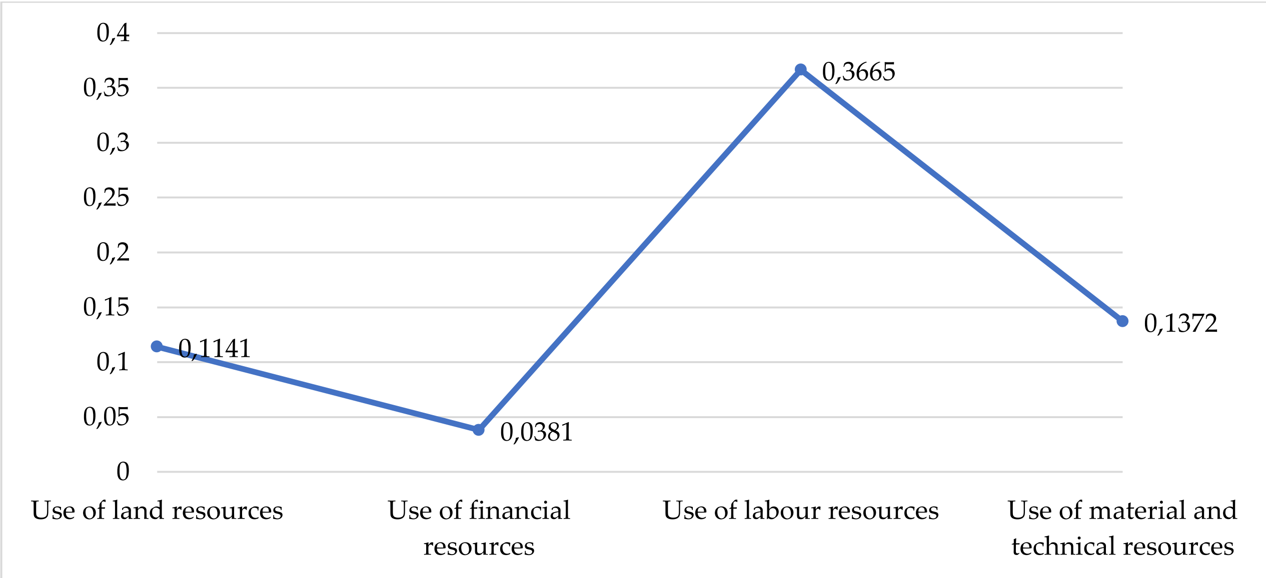

Fig. 2. Integrated values of the components of the economic indicators balanced system at agricultural enterprise 'Ridna Zemlia. Source: authors research.

Based on the results of the constructed diagram, we can conclude that the level of labour resources utilization on the private agricultural enterprise 'Ridna Zemlia' is positive, which is 0.3665. The level of land, material and technical resources utilization is almost the same, their integrated values are 0.1141 and 0.1372, accordingly. The utilization of financial resources is in the worst position, the size of the integral group indicator is 0.0381. In order to determine the level of strategic capability of an agricultural enterprise we calculated the overall integral indicator of the economic indicators balanced system:

Overall integral indicator = 0,1141 + 0,0381 + 0,3665 + 0,1372 = 0,6559.

The calculated general integral indicator of the studied enterprise falls in the range from 0.36 to 0.70. This allows us to conclude that the agricultural enterprise 'Ridna Zemlia' belongs to the list of enterprises with an average level of strategic capability.

SWOT analysis of the 'Ridna Zemlia' agricultural enterprise is indicated in Tab. 4.

Strengths	Weaknesses
1. Solid experience in the agricultural sector. 2. Production of exclusively natural dairy products. 3. Milk processing exclusively from their own farms. 4. The largest number of cattle in the Ivano Frankivsk region. 5. Wide range of products. 6. Use of modern foreign equipment. 7. High-tech modern production. 8. Highly qualified employees. 9. High-quality products, compliance with Ukrainian and European quality standards. 10. High social responsibility.	1. Dependence of an agricultural enterprise on weather conditions. 2. Short storage time of fermented milk products. 3. Sales of dairy products only in those regions that are geographically close to production facilities. 4. High level of competition. 5. Non-perfect marketing policy. 6. Incomplete implementation of strategic planning and lack of a clearly developed strategy.
Opportunities	**Threats**
1. Expansion of the products sold volume. 2. Expansion of the product range. 3. Increase in new production capacity points (new farms). 4. New sales markets entrance. 5. Attracting new investors. 6. Reducing the cost of production. 7. Creation and implementation of an effective development strategy.	1. Escalation of the military situation in the country. 2. Poor weather conditions (drought, freezing of crops, etc.). 3. Emerging competitors (in particular foreign ones). 4. Price increase for agricultural machinery, energy resources, fertilizers. 5. Price increases due to inflation. 6. Reducing consumer demand. 7. Processes of stagnation in the Ukrainian economy. 8. Deterioration of credit conditions (increased interest rates, inefficient credit conditions).

Tab. 4 SWOT analysis of the 'Ridna Zemlia' agricultural enterprise. Source: author's research.

Based on the SWOT analysis results, it is recommended to form a strategic vision in the innovative direction for this agricultural enterprise, that is, to continue improving existing technologies and introduce new ones. This will make it possible to ensure a stable profit in the Ukrainian market, as well as to enter international markets.

After conducting strategic analysis, the third important stage in the implementation of strategic planning at an agricultural enterprise is the construction of a strategy. Since the private agricultural enterprise 'Ridna Zemlia' is an enterprise with an average level of strategic ability, we used the road mapping method, to develop the strategy. An important advantage of this method is that it defines the relationships between different divisions and areas of the enterprise. In addition, the basis of road mapping is the use of new modern technologies and innovations.

Using the above-described method, we formed a roadmap to implement the strategy of the 'Ridna Zemlia' agricultural enterprise (Fig. 3).

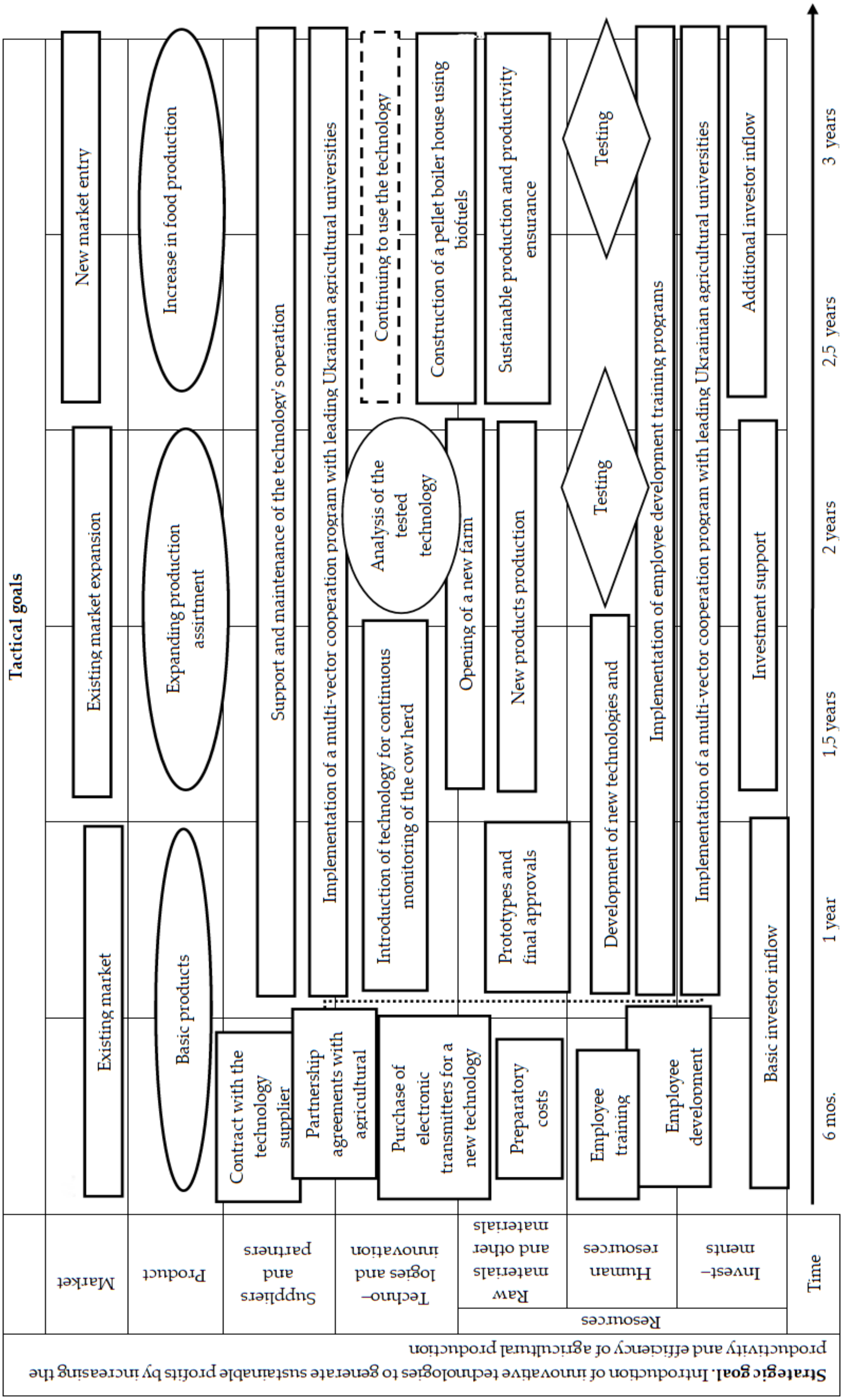

Fig. 3. 'Ridna Zemlia' agricultural enterprise roadmap of development strategy implementation. Source: author's development.

As you can see from Fig. 3, the main strategic goal for the 'Ridna Zemlia' agricultural enterprise is to introduce innovative technologies to generate sustainable profits by increasing the productivity and efficiency of agricultural production. Thus, it is suggested to introduce a new technology, which consists of constant monitoring of the cows' herd. This technology makes it possible to detect the slightest deviations in the state of their health. It is implemented using a personal electronic transmitter attached to the collar of each cow. With its help, the information about the animal (physiological parameters, cow activity, feeding quality) is collected during the day and transmitted to the central computer. This technology is used by one of the most successful agricultural companies in Ukraine, Svarog West Group Corporation. To implement this technology at the initial stage, you need to sign an agreement with the technology supplier. After a year of usage, analyse the proven technology and decide on its further utilization.

It is also planned to open a new farm to expand the existing market and increase production volumes. Using additional investor inflows, within the developed strategy it is possible to construct of a pellet boiler house using biofuels – fuel pellets. This is an important area of alternative energy development, which will allow us to cover our own energy needs.

An important aspect of implementing the strategy and ensuring the effective operation of the private agricultural enterprise 'Ridna Zemlia' is personnel training. After all, investing in human capital is one of the main factors of success in the long term. The current strategy provides for the formation of a staff training plan and the development and implementation of employee development training programs. At the end of each annual course, employees will test their knowledge. It is also proposed to conclude strategic partnership agreements with leading Ukrainian agricultural universities. The main goal of such cooperation is to strengthen the theoretical base with knowledge of modern technologies, as well as train the best students with subsequent employment.

In general, the developed roadmap for strategic planning implementation of the private agricultural enterprise 'Ridna Zemlia' should ensure a sustainable profit in the long term.

5. CONCLUSIONS

In conclusion, using a balanced system of economic indicators, it was established that the private agricultural enterprise 'Ridna Zemlia' has an average level of strategic ability. Based on the conducted SWOT analysis and available information about the company, a roadmap for strategic planning implementation was built. It is based on the introduction of innovative technologies to obtain sustainable profits in the long term. In addition, the use of roadmaps at the enterprise makes it possible to achieve key strategic and tactical goals. They help to focus on long-term planning and improve relationships, provide comprehensive, visual, and autonomous plans. This method focuses business leaders thinking on key tasks at each stage of strategic planning.

REFERENCES

[1] Carter C. The age of strategy: strategy, organizations and society. *Business History*, **55** (7) (2013), 1047–1057. doi: 10.1080/00076791.2013.838030

[2] Fuertes G., Alfaro M., Vargas M., Gutierrez S., Ternero R., Sabattin J. Conceptual Framework for the Strategic Management: A Literature Review – Descriptive. *Journal of Engineering*, **2020** (2020). doi: 10.1155/2020/6253013

[3] Bryson J.M., Edwards L.H., Van Slyke D.M. Getting strategic about strategic planning research. *Public Management Review*, **20** (3), (2018), 317–339. doi: 10.1080/14719037.2017.1285111

[4] Babandi I. The Impact of Strategic Planning on Growth of Small Businesses in Nigeria. *SEISENSE Journal of Management*, **2** (1), (2019) 69–84. doi:10.33215/sjom.v2i1.85

[5] Jaworski J., Sokołowska K., Kondraszuk T. Sources of Strategic Information in Farm Management in Poland. Study Results. *Journal of Management and Business Administration. Central Europe,* **25** (1) (2017), 98–120. doi: 10.7206/jmba.ce.2450-7814.191

[6] Dyczkowska J., Dyczkowski T. An Influence of Strategic Awareness on Management Control: Evidence from Polish Micro, Small and Medium-sized Enterprises. *Management and Business Administration. Central Europe*, **23** (1) (2015), 3–31. doi: 10.7206/mba.ce.2084-3356.131

[7] Chladkova H., Formankova S. Strategy for SMEs in the area of primary agricultural production. *Agricultural Economics*, **62** (9) (2016), 395–406. doi: 10.17221/260/2015-AGRICECON

[8] Schindler J., Graef F., König, H. J. Methods to assess farming sustainability in developing countries. A review. *Agronomy for Sustainable Development,* **35** (2015), 1043–1057. doi: 10.1007/s13593-015-0305-2

[9] Chen C.-C., Yueh H.-P., Liang C. Strategic management of agribusiness: Determinants and trends. *Journal of Entrepreneurship, Management and Innovation,* **12** (4), (2016). doi: 10.7341/20161244

[10] Suriyankietkaew S., Petison P. A Retrospective and Foresight: Bibliometric Review of International Research on Strategic Management for Sustainability, 1991–2019. *Sustainability*, **12** (1) (2019). doi: 10.3390/su12010091

[11] Kalaki R.B., Neves M.F. Strategic plan for the Brazilian agro-industrial citrus system. *Gestão & Produção*, **24** (2) (2017), 338–354. doi: 10.1590/0104-530x1307-15

[12] Yakubiv V., Boryshkevych I., Piatnychuk I., Iwaszczuk N., Iwaszczuk A. Strategy for the Development of Bioenergy Based on Agriculture: Case for Ukraine. *International Journal of Renewable Energy Research,* **10** (3) (2020), 1092–1102. Available at: https://www.ijrer.org/ijrer/index.php/ijrer/article/view/10867/pdf

[13] Yakubiv V., Boryshkevych I. Strategic Analysis of the Development of Renewable Energetics in the World and in Ukraine. *Journal of Vasyl Stefanyk Precarpathian National University,* **5** (3-4) (2018), 33–43. doi: 10.15330/jpnu.5.3-4.33-43

[14] Ziouta A., Azaba A. Industrial Product Service System: A Case Study from the Agriculture Sector. *Procedia CIRP,* **33** (2015), 64–69. doi: 10.1016/j.procir.2015.06.013

[15] Boryshkevych I., Yakubiv V. *The Mechanism of Formation and Implementation of the Strategy of Development of Agricultural Enterprises.* Vasyl Stefanyk Precarpathian National University Publishing House, Ivano-Frankivsk, 2020. (in Ukrainian)

[16] Valverde A., Magalhães-Fraga S., Magalhães J., Barroso W. Agrobiodiversity Products by SWOT Analysis as an Analysis for Strategic Innovation. *Journal of Technology Management & Innovation,* **10** (4) (2015), 57–63. doi: 10.4067/S0718-27242015000400006

[17] Regmi S., Naharki K. A SWOT Analysis of Agribusiness Entrepreneurship in Nepal. *Food & Agribusiness Management*, **1** (2) (2020), 60–65. doi: 10.26480/fabm.02.2020.60.65

[18] Arafat M.Y., Saleem I., Dwivedi A.K. et al. Determinants of agricultural entrepreneurship: a GEM data based study. *International Entrepreneurship and Management Journal*, 16 (2020), 345–370. doi: 10.1007/s11365-018-0536-1

[19] Zhao Q., Huang J. *Roadmap of Agricultural Modernization and Intelligentization Science and Technology Development.* In: Zhao Q., Huang J. (Eds) Agricultural Science & Technology in China: A Roadmap to 2050. Springer, Berlin, Heidelberg, 2011. doi: 10.1007/978-3-642-19128-2_8

[20] Boryshkevych I. Formulation of a Typical Development Strategy for Agricultural Enterprises (by the Method of Hoshin Kanri). *Journal of Vasyl Stefanyk Precarpathian National University,* **6** (3-4) (2019), 15–21. doi: 10.15330/jpnu.6.3-4.15-21

[21] Yakubiv V., Boryshkevych I., Yakubiv R., Balanced System of Economic Performances as a Strategy-forming Tool of Development of Agricultural Enterprises. *Scientific Papers Series "Management, Economic Engineering in Agriculture and Rural Development",* **19** (3) (2019), 669–679.

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Боришкевич Ірина, Іващук Олександр. Моделювання процесу стратегічного планування на сільськогосподарському підприємстві. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 137–146.

Стратегія розвитку є довгостроковою дорожньою картою діяльності підприємства, що дає можливість досягнути більш високих показників по відношенню до конкурентів. Практично всі керівники сільськогосподарських підприємств в процесі стратегічного управління стикаються з низкою проблем, таких як, вибір доцільних інструментів для стратегічного аналізу та методів побудови стратегії. Це виходить із того, що різні сільськогосподарські підприємства мають різні існуючі можливості, наявні ресурси та потреби в стратегічному плануванні. В залежності від стратегічної спроможності сільськогосподарських підприємств, запропоновано використовувати різні інструменти стратегічного аналізу та методи розробки стратегії. На основі проведених досліджень було сформовано механізм здійснення стратегічного планування на сільськогосподарському підприємстві, який складається з трьох етапів. Розроблений механізм апробовано на приватному сільськогосподарському підприємстві "Рідна земля", що є типовим за основними показниками господарської діяльності в Івано-Франківській області. На першому етапі, використовуючи збалансовану систему економічних показників, було встановлено, що дане підприємство має середній рівень стратегічної спроможності. Відповідно до рекомендованих інструментів стратегічного аналізу на другому етапі стратегічного планування автором було проведено SWOT-аналіз сільськогосподарського підприємства та виявлено його сильні і слабкі сторони, існуючі можливості і загрози. На третьому етапі було розроблено дорожню карту реалізації стратегії в межах використання методу роудмеппінг, що передбачений відповідним рівнем стратегічної спроможності. Основною стратегічною метою розробленої стратегії є забезпечення стійкого прибутку в довгостроковій перспективі шляхом зростання продуктивності та ефективності сільськогосподарського виробництва. Таким чином, було запропоновано реалізацію наступних стратегічних завдань: запровадження нової технології, що полягає в постійному моніторингу стада корів, відкриття нової ферми для розширення існуючого ринку та збільшення обсягів виробництва продукції, побудова пелетної котельні з використанням біопалива, а також формування плану навчання персоналу та розробка і реалізація навчальних програм розвитку працівників.

Ключові слова: стратегія, метод, сільськогосподарське підприємство, стратегічне планування, дорожня карта.

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TERRITORIAL FRAMEWORK OF LOCAL SELF-GOVERNMENT: BASIS OF LEGISLATIVE REGULATION

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Abstract. Ukraine is increasingly trying to integrate into European structures. The civilizational, geopolitical and geo-economic choice for our country is obvious, therefore, difficult, consistent and sometimes unconventional and unpopular political decisions are required to implement it. The real implementation of the deconcentration, decentralization and subsidiarity principles in the practice of public administration is necessary, in particular, due to the introduction of new models of relations between the political center and the regions. Regional disproportions in the territory development of Ukraine, the failure to implement the reform on the ground in specific administrative and territorial units, the spread of corruption schemes – all these are the consequences of an ineffective model of local self-government and state management of regional development, that became the beginning of the administrative and territorial reform in the state. And in order to ensure a high-quality process of administrative and territorial reform, it is important, and to some extent and the most basic, is the process of adopting high-quality regulatory base for legislation. The article identifies the main directions for the formation of an effective management system at all levels, including: the formation of an optimal territorial basis, the provision of appropriate material, administrative, organizational and financial conditions for the implementation of the powers granted to them by local governments, a clear delineation of powers between management bodies of different levels based on decentralization, mechanism development of the state control and population involvement in the community development. The legislative base, which was adopted in the context of supporting the reform of local self-government in Ukraine, has been analyzed. The legislative guidelines for the decentralization reform and regional policy in Ukraine have been determined and substantiated. Deficiencies and shortcomings of the normative-legal and institutional support system of the local self-government reform have been identified and ways of their elimination have been proposed.

Keywords: administrative and territorial reform, decentralization, self-government bodies, legal framework, territorial communities.

JEL Classification: O18, R11, R51.

1. INTRODUCTION

The current state of the state-building processes organization in Ukraine is characterized by the presence of a large number of problems, the main of which is the inconsistency of the organizational, functional, legal and socio-economic components with the conditions that are relevant for our state today. Speaking about the state of reforming the public administration sector, it can most often be described as unsatisfactory. When setting priorities, the central government proceeds from the needs of the state, but has poor understanding of the development needs of community and territories at the local level. Programs to stimulate the development of individual regions, the use of the cross-border cooperation practice, the introduction of the new organizing models in public-political processes. And one of the main reasons for this is the imperfect administrative and territorial structure of the state. It is not talking about the inefficiency or erroneousness of the unitarity and equality path of the regions chosen by Ukraine. But it should be understood that the uneven development of the regions, a large disproportion in the distribution of productive forces, the specificity of cultural and mental characteristics of various territorial communities puts Ukraine in front of the need to search for a new model of relations between the central and regional authorities, as well as regions among themselves, the implementation of the new regional cooperation forms on the subsidiarity and solidarity principles.

2. Literature Review, Generalization of Main Statements

In the modern conditions in our country, the ideas of the territorial and administrative structure are especially relevant for the research and adaptation to the domestic financial, economic and management systems. Many scientists are engaged it in their research and analysis, in particular, M. Baimuratov, O. Batanov, V. Beschastnyi, V. Borschevskyi, P. Zhuk, O.V. Kampo, O. Kyrylenko, M. Kozoriz, V. Kravtsiv, V. Kravchenko, I. Lunina, M. Melnyk, H. Oleksiuk, Kh. Patytska, V. Pysmennyi, Yu. Rohozian, I. Storonianska, V. Fedosov, S. Shults and others.

Along with this, in the conditions of the reform stages passage, questions arise, the formation of a legislative base, which is the basis of all processes on formation and development of territorial communities, as well as the legality of their activities.

The purpose of the article is to analyze the legal framework for regulating the formation of territorial communities.

3. Discussion

In essence, investments in human capital are investments in intangible assets that accumulate and develop intangible resources for the productive activity of people, namely: knowledge, competencies, experience, health, social skills, intellectual and entrepreneurial abilities. Accordingly, depending on the investment purpose, the following components of human capital distinguish:

Local self-government is one of the most effective tools for local governance and territorial development. Where it really works, where the local population has a real right and opportunity to independently resolve issues of local importance, there is an increase in revenues of local budgets and socio-economic development in general.

In each state, depending on the characteristics of its political and territorial as well as administrative and territorial structure, the form of government and political regime, historical, national, geographical and other features, local self-government has a specific form and name.

The legitimacy of local self-government in Ukraine is confirmed by the Constitution and the Law of Ukraine “On Local Self-Government in Ukraine”, that determine the system and guarantees of local self-government, the foundations of organization and activity, the legal status and responsibility of bodies and officials of local self-government.

Among all principles of the local self-government functioning determined by this law, the principle of legal, organizational and material and financial independence of local self-government, which it is endowed with within the powers determined by legislation, acquires special significance. Legal and organizational independence is expressed in the granting of certain powers to local governments, within which they act independently, make appropriate legal decisions, and are also responsible for the implementation of these powers. In addition, local self-government bodies may be granted separate powers of executive bodies, in the exercise of which they are subject to the control of the relevant executive bodies.

The foundations of local self-government are economic, social, financial, legal and other opportunities and conditions that have objectively developed in society, the totality of which forms the basis on which the system of local self-government is built. These are the objects of reality on which the authority's activities are based, the resources they have. They are diverse in nature and in their object composition, which allows them to be classified.

One of these foundations of local self-government is the territorial basis, the consolidation of which is important, since local self-government is characterized primarily by certain spatial and graphic factors and can be carried out by a territorial community within the administrative boundaries of settlements [1, p. 86].

In addition to the Law of Ukraine "On Local Self-Government in Ukraine," an important document to substantiate the reform purpose is the Concept of local self-governance and territorial power reforming [2]. The problems identified for overcoming at the state level include:

– low level of quality and accessibility of social services as a result of resource insolvency by local authorities to ensure the implementation of their own and delegated powers;

– deterioration of water, sewer and heating networks, as well as the unsatisfactory state of the housing stock in the conditions of financial insolvency of the self-government bodies, to ensure their repair and return to normal condition, accompanied by an increase in accident rate and an increased risk of technological shocks;

– difficult demographic situation, which is manifested in an aging population, depopulation of rural areas and most monofunctional cities;

– inconsistency of local policies on the socio-economic development of the territory with the interests of communities in today's conditions;

– population lack in ensuring the development of community and solving issues of local importance, the absence of direct democracy institutions and cooperation with local authorities, the insolvency of residents through the interaction to achieve the goals of community;

– low level of qualification and professionalism of local self-government officials was the result of the low competitiveness of local authorities in the labour market and the low level of prestige of such posts; this problem was subsequently a result of a decrease in the effectiveness of managerial decisions;

– corporatization of self-government bodies, increasing corruption, secrecy and non-transparency of their activities;

– excessive resource and administrative centralization;

– lack of ubiquity of local self-government, in particular on resolving issues in the field of land relations.

To overcome the above problems of the local self-government development, the document [2] defines seven directions for the establishment of an effective management system at all levels and for the achievement of high-quality public services, namely:

– formation of an optimal territorial base as a basis for ensuring the development of local self-government;

– ensuring the appropriate material, administrative, organizational and financial conditions for the implementation by local self-government of the authority granted to them;

– clear delineation of powers between governing bodies at various levels on the basis of decentralization;

– formation of an effective mechanism of state control over the activities of local authorities and the conformity of their management decisions with legislative and regulatory acts;

– development of direct democracy forms, the involvement of the population in the development of community;

– improving the coordination mechanism of local self-government.

Other legislative acts that have become fundamental since the beginning of the reform can be called the Law of Ukraine "On the voluntary unification of territorial communities", the Method for the formation of capable territorial communities, which determined the organizational basis for the ATC formation, etc. (Table 1). In accordance with the Methody, territorial communities of villages (townships, cities) are capable, which, as a result of voluntary amalgamation, are able to independently or through local governments provide an appropriate level of service, in particular in the field of education, culture, healthcare, social protection, housing and communal services economy, taking into account human resources, financial support and infrastructure development of the corresponding administrative and territorial unit [3].

The next step of the legislative and executive power branches was the adoption of the Plan for Legislative Support to Reforms in Ukraine [11], which was supposed to ensure consistency, comprehensiveness and defined clear guidelines for the reform. This plan determined a number of bills required for the adoption of their conceptual foundations, as well as deadlines and those responsible for their submission (Tab. 2).

The adoption of such a document at the beginning of the decentralization reform makes it possible today, given the completion of the voluntary amalgamation of the territorial communities and the "laying" of the foundations for enlarging the administrative and territorial units of the subregional level, to substantiate the state of the legislative support of the process and identify the risks that the adoption of the planned legislative acts entails.

First of all, it should be noted that today an effective regulatory framework has been formed for the decentralization reform in Ukraine. Although most of the regulatory acts in the field of decentralization were adopted in 2014-2015, today and in the future, legal support for this process is being formed, in particular in the context of overcoming the risks that have arisen after the completion of the initial stage of the reform. Among recently adopted documents:

Nature of the document	*Name*	*By and when adopted*	*The conceptual framework, defined in the document*
System documents	On approval of the Concept of reforming local self-government and territorial organization of power in Ukraine	The Order of the Cabinet of Ministers of Ukraine No. 333-p dated 04/01/2014	*reform goal is justified, the problems that should be overcome in the process of implementing transformations and the ways to solve them are clearly identified*
	On the Sustainable Development Strategy "Ukraine 2020"	The Decree of the President of Ukraine No. 5/2015 dated 01/12/2015	*strategic document that outlines the principles for implementing 62 reforms in Ukraine and identifies indicators for their implementation*
	On the principles of state regional policy	The Law of Ukraine No. 159-VIII dated 02/05/2015	*aimed at determining legal, economic, social, environmental, humanitarian and organizational foundations of state regional policy in the context of domestic policy of Ukraine*
Documents of an organizational nature (determination of the basis for the ATC formation)	On voluntary amalgamation of territorial communities	The Law of Ukraine No. 157-19 dated 02/05/2015	*features and conditions for the ATC formation are identified, the main aspects of regulating the relationships arising in the process of voluntary amalgamation of territorial communities and voluntary amalgamation to already established ATC are substantiated*
	On cooperation of territorial communities	The Law of Ukraine No. 1508-VII dated 06/17/2014	*organizational and legal foundations of the cooperation of territorial communities, the basic principles, forms and mechanisms of such cooperation, the features of its stimulation and financing, as well as control are determined*
	On approval of the Methody for the formation of capable territorial communities	The Resolution of the Cabinet of Ministers of Ukraine No. 214 dated 04/08/2015	*mechanism is formed and the conditions for the formation of capable territorial communities are determined, the need is justified and the procedure for developing and approving a long-term plan for the formation of community territories is established*

Nature of the document	*Name*	*By and when adopted*	*The conceptual framework, defined in the document*
Documents of a financial nature (determination of financial support aspects and distribution of powers between management levels)	On introducing amendments to the Budget Code of Ukraine regarding the reform of inter-budget relations	The Law of Ukraine No. 79-19 dated 12/28/2014	*features of the redistribution of budget revenues at various levels and the introduction of a new system of inter-budget equalization are justified;*
	On introducing amendments to the Tax Code of Ukraine and some legislative acts of Ukraine regarding tax reform	The Law of Ukraine No. 71-19 of 12/28/2014	*features of tax collection and crediting of taxes as a result of redistribution of revenues between budgets of different levels are determined*
	On making amendments to the Budget Code of Ukraine regarding the features of the formation and execution of ATC budgets	The Law of Ukraine No. 837-VIII dated 11/26/2015	*interaction boundaries of the administrative-territorial units' budgets in various levels are determined, the basis for the formation and execution of local community budgets is justified*

Tab. 1. Legislative framework adopted in the context of supporting local self-government reform. Source: compiled on the basis of [2, 3-10].

Reform area	*Title of the bill*	*Conceptual framework defined by the bill*
Administrative and territorial structure	On the administrative and territorial structure of Ukraine	*A new three-level structure of the administrative and territorial structure of Ukraine is provided, determination of the procedure for the formation and liquidation of such units, changes in their borders, the classification of settlements in one or another category*
Decentralization of power and local self-government reform	On amendments to the Constitution of Ukraine regarding the powers of state authorities and local authorities, territorial organization of power, decentralization	*The main reform guidelines were identified: 1) decentralization and public administration reform; 2) reform of regional policy. It is envisaged: 1) creation of conditions for the formation of capable territorial communities and ensuring the omnipresence of local self-government; 2) determination of ways to reduce the conflict between local government and executive authorities through the delimitation of their competencies in accordance with the principle of subsidiarity, refusal to delegate the powers of district and regional councils to executive authorities.*
	On amendments to the Budget and Tax Codes of Ukraine regarding the allocation of stable sources of income to local budgets and the expansion of the revenue base of local budgets, while ensuring the definition of common rates of deductions for personal income tax and income tax of private sector entities for each type at local budgets	*In the context of the adoption of these changes, there is a need to ensure: 1) adequate resource support for local self-government; 2) introduce a horizontal system for equalizing the potential of local budgets by income.*

Reform area	*Title of the bill*	*Conceptual framework defined by the bill*
Decentralization of power and local self-government reform	On local self-government authorities in Ukraine (new edition)	*It is envisaged 1) to ensure a clear legal interpretation of the role of local self-government in Ukraine; 2) providing the governing bodies with a basic level of real authority to approach a citizen and increasing the efficiency of providing public services; 3) the distribution of powers between local authorities of the district and regional levels; 4) the introduction of transparent mechanisms for administrative supervision of public authorities in relation to local authorities.*
	On local executive authorities	*There is a regulatory justification for the creation process of the executive bodies of the respective councils, which will take over part of the powers of the central executive authorities, in particular to control the activities of self-government bodies.*
	On local referendum	*Must ensure legislative settlement of the local referendum issue.*
	On self-organization bodies of the population (new edition)	*Provides for the independence of the formation process of self-organization bodies of the population from the will of local authorities*
	On municipal guard	*It should provide justification for: 1) the legal prerequisites for ensuring the protection of law and order, respect for human rights and freedoms in the context of decentralization; 2) granting the right to self-government bodies to form municipal police at the expense of territorial communities; 3) establishment of mechanisms for the implementation of local authorities decisions in the field of legality, law and order and the protection of rights and freedoms, interests of a citizen*
	On making amendments to some legislative acts of Ukraine regarding cross-border and regional cooperation of local and regional authorities	*It envisages the introduction of regulatory standards for the creation and activities of Euroregions, the formation of a coordination model of state policy in the field of cross-border cooperation.*
Service reform in self-government authorities	On service in local self-government authorities (new edition)	*It envisages the adoption of the Law of Ukraine "On Service in Local Self-Government Authorities", based on European principles of public service*

Tab. 2. Legislative guidelines for decentralization reform and regional policy in Ukraine.
Source: compiled on the basis of [11].

1) The Law of Ukraine "On Amending the Law of Ukraine "On the Voluntary Amalgamation of Territorial Communities" on the voluntary accession of territorial communities of villages and townships to territorial communities of regional significance cities" [12], which recognized territorial communities of regional significance cities as capable – the law was adopted in 2018 year in order to solve the problem of non-occupation of large cities by the process of ATC formation (this is due to the fact that cities, being in a winning position from transferring resources and powers to the local level, do not aground stimulus in association with the surrounding rural communities; besides, for the passage of a certain time there was a trend of failure of small villages to unite with the big city for fear of losing their own territory management and left the city without the amalgamation process);

2) The Law of Ukraine "On Amending Certain Laws of Ukraine regarding the status of village, township headman" [13], in particular in the context of amendments to the Law of Ukraine "On Service in Local Self-Government Authorities" [14], aimed at effectively regulating the activities of employees in local self-government authorities and increase the prestige of the service – such changes are aimed at overcoming the problem of the lack of qualified personnel in local self-government authorities and encouraging employees to provide high-quality public services and in the communities;

The Law of Ukraine "On Amending the Law of Ukraine "On the Voluntary Amalgamation of Territorial Communities" to simplify the procedure for approving long-term plans for the territory formation in communities of the Autonomous Republic of Crimea, regions" [15], adopted to simplify the procedure for approving long-term plans for the formation of community territories (the Law defines that, firstly, community amalgamation will continue only according to the long-term plan, and secondly, the procedure for creating long-term plans will no longer include an approval stage of these amendments by regional councils) – it is expected that in this way the politicization problem of local elites and their restraining influence on the process of community enlargement will be eliminated.

At the same time, it should be noted that the untimely and incomplete implementation of the Plan for legislative support to reforms in Ukraine in terms of decentralization and local self-government reform should be noted, since from the planned for adoption in 2015-2016 80% of draft laws have not been adopted today. The bills that are fundamental for effective decentralization in Ukraine remain as adopted: "On the foundations of the administrative and territorial structure","On amendments to the Constitution (regarding decentralization of power) ","On local executive bodies","On the procedure for the formation, liquidation of districts", establishing and changing their borders, amending the Laws of Ukraine "On Local Self-Government","On Bodies of Self-Organization of the Population". Thus, the non-adoption of the law on the administrative and territorial structure of the state is accompanied by the uncertainty of the system of the territorial organization of power, and the delay in introducing amendments to the Constitution of Ukraine, which should coordinate at the legislative level the change in the administrative and territorial structure and the distribution of powers between governing bodies at various levels and the role of prefectures in the process development of territories, raises doubts about the irreversibility of the reform of local self-government in Ukraine.

4. CONCLUSIONS

Given the importance of these bills, it is worth noting that their rejection is accompanied by an increase in numerous risks and a slowdown in the implementation of local self-government reform, and may also be evidence of a lack of political will to complete it. Among other shortcomings and deficiencies in the system of legal and institutional support for the reform of local self-government are the following:

– poor coordination of the participants activities in the reform of local self-government at various levels (at the level of territorial communities, district, regional, central and subregional levels of government), at the moment it is manifested in the absence of a connection between the regional development policy and the decentralization process;

– lack of regulatory justification and distribution clarity of powers in areas that are characterized by a multi-level representation;

– weak links between the processes of reforming the local self-government system and sectoral reforms, resulting from the emergence of new risks and the inability of self-government bodies to respond in a timely manner to changes in the mechanisms for the provision of public services;

– lack of clear criteria for determining the impact of the ATC formation and development on the life quality of the population and clear boundaries of managerial freedom of local self-government authorities.

Therefore, it should be noted that only a qualitatively formed regulatory and legal framework will serve as the basis for the ability and functionality of the amalgamated territorial communities.

REFERENCES

[1] Kuybida V.G. (Ed) *Administrative and territorial structure of Ukraine. History. Modernity. Perspectives*. Secretariat of the Cabinet of Ministers of Ukraine. Geoprint, Kyiv, 2009. (in Ukrainian)

[2] Cabinet of Ministers of Ukraine. On Approval of the Concept of Local Governance and Authorities' Territorial Organization Reforming in Ukraine. Resolution № 333-r as of 1 April 2014. (2014). Avaolable at: https://zakon.rada.gov.ua/laws/show/333-2014-p (in Ukrainian)
[3] Cabinet of Ministers of Ukraine. (2015). On Approval of the Methodology of Forming of Capable Territorial Communities. Resolution of the Cabinet of Ministers of Ukraine. № 214 as of 8 April 2015. (2015). Available at: https://zakon.rada.gov.ua/laws/show/214-2015-п (in Ukrainian)
[4] President of Ukraine. On Sustainable Development Strategy "Ukraine – 2020". Order of the President of Ukraine № 5/2015 as of 12 January 2015. (2015). Available at: https://zakon.rada.gov.ua/laws/show/5/2015 (in Ukrainian)
[5] Verkhovna Rada of Ukraine. On Voluntary Consolidation of Territorial Communities. Law of Ukraine № 157-19 as of 5 February 2015. (2015). Available at: https://zakon.rada.gov.ua/laws/show/157-19 (in Ukrainian)
[6] Verkhovna Rada of Ukraine. On Cooperation of Territorial Communities. Law o Ukraine № 1508-VII as of 17 June 2014. (2014). Available at: https://zakon.rada.gov.ua/laws/show/1508-18 (in Ukrainian)
[7] Verkhovna Rada of Ukraine. On foundations of Public Regional Policy. Law o Ukraine № 159-VIII as of 5 February 2015. (2015). Available at: https://zakon.rada.gov.ua/laws/show/156-19 (in Ukrainian)
[8] Verkhovna Rada of Ukraine. On Amendments to the Budgetary Code of Ukraine Regarding the Reform of Interbudgetary Relations. Law of Ukraine № 79-19 as of 28 December 2014. (2014). Available at: https://zakon.rada.gov.ua/laws/show/79-19 (in Ukrainian)
[9] Verkhovna Rada of Ukraine. On Amendments to the Tax Code of Ukraine and Several Regulations of Ukraine Regarding the Tax Reform. Law of Ukraine № 71-19 as of 28 December 2014. (2014). Available at: https://zakon.rada.gov.ua/laws/show/71-19 (in Ukrainian)
[10] Verkhovna Rada of Ukraine. On Amendments to the Budgetary Code of Ukraine Regarding the Peculiarities of Forming and Execution of CTCs' Budgets. Law of Ukraine № 837-VIII as of 26 November 2015. (2015). Available at: https://zakon.rada.gov.ua/laws/show/837-19 (in Ukrainian)
[11] Verkhovna Rada of Ukraine. Plan of Legal Framework of Reforms Maintenance in Ukraine. Resolution of Verhovna Rada of Ukraine № 509-VIII as of 4 May 2015. (2015). Available at: https://zakon.rada.gov.ua/laws/show/509-19 (in Ukrainian)
[12] Verkhovna Rada of Ukraine. On Voluntary Consolidation of Territorial Communities Regarding the Voluntary Incorporation of Territorial Communities of Villages and Towns in Territorial Communities of Cities of Oblast Significance. Law of Ukraine № 2379-VIII as of 3 April 2018. (2018). Available at: https://zakon.rada.gov.ua/laws/show/2379-19 (in Ukrainian)
[13] Verkhovna Rada of Ukraine. On Amendments to Several Laws of Ukraine Regarding the Status of the Heads of Villages and Towns. Law of Ukraine №1848-VIII as of 9 February 2017. (2017). Available at: https://zakon.rada.gov.ua/laws/show/1848-19 (in Ukrainian)
[14] Verkhovna Rada of Ukraine. On Service in Local Governance Authorities. Law of Ukraine № 2493-VIII as of 28 November 2019. (2019). Available at: https://zakon.rada.gov.ua/laws/show/2493-14 (in Ukrainian)
[15] Verkhovna Rada of Ukraine. On Amendments to the Law of Ukraine "On Voluntary Consolidation of Territorial Communities" Regarding the Simplified Procedure of Approval of Perspective Plans of Territorial Communities Forming in the Autonomous Republic of Crimea, Oblasts. Law of Ukraine №348-IX as of 5 December 2019. (2019b). Available at: https://zakon.rada.gov.ua/laws/show/348-20

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Сірик Зеновій, Білик Ростислав, Панухник Олена. Територіальна основа місцевого самоврядування: основи законодавчого регулювання. *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 147–155.

Україна все активніше намагається інтегруватися в Європейські структури. Цивілізаційний, геополітичний та геоекономічний вибір для нашої країни є очевидним, а тому для його реалізації необхідні важкі, послідовні та інколи нетрадиційні й непопулярні політичні рішення. Необхідне реальне втілення принципів деконцентрації, децентралізації та субсидіарності в практику державного управління, зокрема через запровадження нових моделей взаємовідносин між політичним центром та регіонами. Регіональні диспропорції розвитку території України, неспроможність реалізації реформи на місцях в конкретних адміністративно-територіальних одиницях, поширення корупційних схем – все це наслідки неефективної моделі місцевого самоврядування та державного управління регіональним розвитком і саме ці процеси стали початком адміністративно-територіальної реформи в державі. А для того щоб забезпечити якісний процес адміністративно-територіальної реформи важливим, а в деякій і мірі і найосновнішим є процес прийняття якісного нормативно-правового за законодавства. У статті визначено основні напрями становлення ефективної системи управління на усіх рівнях, серед яких: формування оптимальної територіальної основи, забезпечення відповідних матеріальних, адміністративно-організаційних та фінансових умов для реалізації органами місцевого самоврядування наданих їм повноважень, чітке розмежування повноважень між органами управління різних рівнів на основі децентралізації, розвиток механізму державного контролю та залучення населення до розвитку громади. Проаналізовано законодавчу базу, яка була прийнята в контексті супроводу реформи місцевого самоврядування в Україні. Визначено та обґрунтовано законодавчі орієнтири реформи децентралізації та регіональної політики в Україні. Визначено недоліки та не доопрацювання системи нормативно-правового та інституційного забезпечення реформи місцевого самоврядування та запропоновано шляхи їх усунення.

Ключові слова: адміністративно-територіальна реформа, децентралізація, органи самоврядування, нормативно-правова база, територіальні громади.

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WHY DO DEVELOPED ECONOMIES BECOME VULNERABLE TO ECONOMIC CYCLES?

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Abstract. The possible reasons for the intensification of cyclical fluctuations of the economies of the developed countries in the last decade are analyzed in the article. At the same time, the countries with risky markets (emerging markets and developing economies) are experiencing lower GDP losses during cyclical reductions of the economy. This is particularly paradoxical in view of the fact that developed economies are generally considered to be more stable and competitive. Besides, during the twentieth century, mankind has accumulated considerable experience in counteracting the cyclical nature of national economies and learned to smooth the amplitude of cyclical fluctuations. The authors of the article put forward and substantiate the assumption that the reason for the increase in the amplitude of cyclical fluctuations, increase of the depth of cyclical fluctuations of economies of the developed countries compared to the countries with emerging markets and developing economies, is the significant difference in the structure of these economies. The significant predominance of the tertiary sector in the developed economies makes them more vulnerable to cyclical fluctuations due to the greater multiplier effect that is inherent in the tertiary sector industries compared to other sectors of the economy. The conducted correlation analysis showed the presence of the strong relationship between such parameters of the economy as the share of the tertiary sector in the economy and the percentage value of the predicted economic recession in 2020 in the developed economies and emerging markets and developing economies. But it is necessary to keep in mind that the autonomous cost multiplier works in the opposite direction, accelerating the economic decline during the economic cycle. That is why, in our opinion, measures of state regulation of the economy today should be increasingly aimed at regulating the tertiary sector to prevent the increasing cyclicality of the modern global economy, as the leading economic leaders themselves are often becoming generators of the business cycle due to economic financialization and tertiary sector growth in general.

Keywords: economic cycles, economic growth rate, economic structure, tertiary sector, COVID-19.
JEL Classification: E32.

1. INTRODUCTION

State regulation of the economy since the Keynesian revolution of the first half of the last century has become an integral part of the economic life of the vast majority of countries. The activities of the state in maintaining the stability of reproduction and provision of conditions for economic development have traditionally become an important and universally recognized form of the participation of the state in the economy. This is reflected in the growth of the level of fiscal deductions to GDP and the influence of governments on the distribution of resources and income, the rate of economic development and the level of welfare of the population.

2. LITERATURE REVIEW, GENERALIZATION OF MAIN STATEMENTS

Considering that humanity has accumulated considerable experience in regulating national and world economies, it is worth to expect that over time, governments will learn to smooth out cyclical fluctuations and even foresee the next economic cycles. However, as the experience of the last decade shows, this has not happened. According to forecasts, the economic decline in 2020 will affect most countries. And this can be explained. Mankind has not yet had the experience to deal with the effects of the epidemiological global economic crisis caused by the spread of the COVID-19 virus. During 2020, many attempts have been made in the scientific literature to analyze the effects of the global recession caused by pandemia and to assess its impact on the prospects of global economic growth, international trade, employment and unemployment [1; 2; 3; 4; 5]. The essence, causes, mechanism and consequences of financial crises [6–9], essence, causes and mechanisms of business cycles [10], virtualization of the economy and financial markets [11] are described in modern scientific literature sufficiently in detail as by domestic and foreign economists. In scientific works today are actively analyzed the lessons and consequences of the global financial crisis of 2008 [12, 13], the synchronicity of global cycles in economies of different countries [14] is investigated, the possibilities of cyclical fluctuations in the future [15–17] are estimated.

3. DISCUSSION

Nevertheless, the obvious question remains unanswered: why have developed economies experienced a faster decline in GDP than developing countries and countries with risky markets (emerging markets and developing countries) (Tab. 1)? Besides that, the thing is not in a difference of several percent of GDP reduction. Developed economies in 2020 due to the global economic crisis will lose according to the forecasts 2.7 times more GDP than the above-mentioned countries with risky markets and developing countries [18]. Besides, it is necessary to remember that the percentage of GDP for the developed economies and the percentage of GDP for the other countries mentioned are very different values, given the huge difference in absolute GDP.

	2019	2020	2021
Advanced economies	1,7	-8,0	4,8
USA	2,3	-8,0	4,5
Euro Area	1,3	-10,2	6
Germany	0,6	-7,8	5,4
France	1,5	-12,5	7,3
Italy	0,3	-12,8	6,3
Spain	2	-12,8	6,3
Emerging markets and developing economies	3,7	-3,0	5,9
China	6,1	1,0	8,2
Emerging markets and developing Europe	2,1	-5,8	4,3

Tab.1. Dynamics of real GDP of the world in 2019 - 2021(per cent, 2020, 2021 - forecast). Source: [23].

The World Bank provides somewhat more optimistic but also negative prospects for the development of global and regional economies (Tab. 2). But one thing remains common in the forecasts – countries with developed economies are experiencing a significant economic decline compared to other less developed economies [19].

		2017	2018	2019	2020*	2021*
A. Advanced economies		**2,5**	**2,1**	**1,6**	**-7,0**	**3,9**
1.	United States	2,4	2,9	2,3	-6,1	4,0
2.	Euro Area	2,5	1,9	1,2	-9,1	4,5
3.	Japan	2,2	0,3	0,7	-6,1	2,5
B. Emerging market and developing economies		**4,5**	**4,3**	**3,5**	**-2,5**	**4,6**
	East Asia and Pacific	6,5	6,3	5,9	0,5	6,6
1.	China	6,8	6,6	6,1	1,0	6,9
2.	Indonesia	5,1	5,2	5,0	0,0	4,8
3.	Thailand	4,1	4,2	2,4	-5,0	4,1
	Europe and Central Asia	4,1	3,3	2,2	-4,7	3,6
4.	Russia	1,8	2,5	1,3	-6,0	2,7
5.	Turkey	7,5	2,8	0,9	-3,8	5,0
6.	Poland	4,9	5,3	4,1	-4,2	2,8
	Latin America and the Caribbean	1,9	1,7	0,8	-7,2	2,8
7.	Brazil	1,3	1,3	1,1	-8,0	2,2
8.	Mexico	2,1	2,2	-0,3	-7,5	3,0
9.	Argentina	2,7	-2,5	-2,2	-7,3	2,1
	Middle East and North Africa	1,1	0,9	-0,2	-4,2	2,3
10.	Saudi Arabia	-0,7	2,4	0,3	-3,8	2,5
11.	Iran	3,8	-4,7	-8,2	-5,3	2,1
12..	Egypt	4,2	5,3	5,6	3,0	2,1
	South Asia	6,5	6,5	4,7	-2,7	2,8
13.	India	7,0	6,1	4,2	-3,2	3,1
14.	Pakistan	5,2	5,5	1,9	-2,6	-0,2
15.	Bangladesh	7,3	7,9	8,2	1,6	1,0
	Sub-Saharan Africa	2,6	2,6	2,2	-2,8	3,1
16.	Nigeria	0,8	1,9	2,2	-3,2	1,7
17.	South Africa	1,4	0,8	0,2	-7,1	2,9
18.	Angola	-0,1	-2,0	-0,9	-4,0	3,1
Real GDP						
	High-income countries	2,4	2,2	1,7	-6,8	3,8
	Developing countries	4,8	4,4	3,7	-2,4	4,7
	Low-income countries	5,4	5,8	5,0	1,0	4,6

Tab.2. Annual average growth rates of real gross domestic product (per cent, 2020, 2021* - prospects). Source: [24].*

At first glance, it seems that the answer lies on the surface: the largest losses of GDP should be suffered by the countries in which the spread of the epidemic has become larger. But in reality, such conclusions would be incorrect. Different levels of testing, non-simultaneity, irregularity and different scales of quarantine restrictions that could affect countries' economies do not give possibilities for an objective quantitative analysis. This forces us to look for the answer on another plane.

In addition, the question of a significant decline in developed economies during the economic cycle compared to the economies of developing countries arises not for the first time. During the global financial crisis of 2009, the economies of developed countries reduced by 4 percent, while developing countries only slowed down their average annual economic growth rate from 6.8 percent to 2.5 percent (Tab. 3).

	1980	2000	2005	2009	2011
Developing economies	3,5	6,1	6,8	2,5	5,8
Developed economies	3,2	1,6	2,4	-4	1,4
Transition economies	3,5	5,7	6,5	-6,5	4,5

Tab. 3. Annual average growth rates of real gross domestic product. Source: [25].

Analyzing the reasons for the cyclical decline in GDP of developed economies in 2009, we concluded that the main reason should be considered the growing financialization of economies in developed countries [20, 21]. The financialization of the economies of the world's leading countries, which occurs due to the growing gap between real and financial capital, not only makes the developed economies vulnerable economic systems but also increases the amplitude of cyclical fluctuations. In our opinion, the coronavirus crisis of 2020 has somewhat expanded the existing ideas about the nature of cyclical economies. The financial sector of the economy is a component of the tertiary sector – the service sector. Services include financial and banking, insurance, wholesale and retail trade, transport, information industry (information technology is often singled out and included in the quaternary sector of the economy), education, medicine, tourism, entertainment industry etc. The tertiary sector of the economy in developed countries is the largest sector both in terms of GDP share and employment and it is growing rapidly. And this is one of the main features and differences of developed economies from the economies of other countries (Tab. 4).

	US	UK	Japan	Canada	Spain	Italy	Germany	France
Agriculture	0,9	0,7	1,1	1,6	3,8	2,1	0,7	1,7
Industry	19,1	20,3	30,1	28,2	23,2	23,9	30,7	19,5
Services	80	79,2	68,7	70,2	74,2	73,9	68,6	78,8

Tab. 4. Structure of the economies of the developed countries. (per cent, 2017). Source: [26].

Thus, for example, the structure of the economies of Central and Eastern Europe (Tab. 4) shows a lag in the services sector (average index is 63.3 percent), while in the Eurozone the services sector comprises in average 70.9 percent of the economy [22].

	Agriculture	Industry	Services
Ukraine	12,2	28,6	60
Russia	4,7	33,2	62,6
Romania	4,2	33,2	62,6
Slovakia	3,8	35	61,2
Slovenia	1,8	32,2	65,9
Poland	2,2	40,2	57,4
Czechia	2,3	36,9	60,8
Croatia	3,7	26,2	70,1
Hungary	3,9	31,3	64,8
Bulgaria	4,3	28	67,4

Tab. 5. Structure of economies of countries belonging to the "Emerging markets and developing Europe" group (per cent, 2017). Source: [26].

Analyzing the above statistics, we assume that the indices of the structure of the economy and economic growth are interrelated. Namely, do the indicators of the share of the tertiary sector in the economy correlate with the dynamics of GDP during the economic cycle? To test this hypothesis, we calculated the Pearson correlation coefficient for these two variables (the share of the tertiary sector in GDP and economic growth forecast indices for 2020) for the most significant leading countries and groups of countries: USA, China, Eurozone countries and Central and European countries. Eastern Europe, classified as "Emerging markets and developing Europe". The correlation coefficient was 0.8602, which indicates a fairly close relationship between the stated parameters of the country's economy. In favor of the existence of such a relationship, we can also cite a couple of variables for China: GDP forecast for 2020 +1 per cent, with a record low tertiary sector 51.6 per cent [19, 22].

4. Conclusions

Of course, the results of our study can be considered as preliminary and such which need further verification. But the obtained results provide an opportunity to substantiate some explanations concerning the established dependence. It is obvious that developed economies with a relatively larger tertiary sector have more efficient economies because the service sector generates more value-added per unit of cost, it creates more jobs, it creates longer value-added chains, and it appears as a powerful engine of modern developed economies. It is no coincidence that capital is increasingly flowing into the tertiary sector; it is a global trend in the development of all national economies, which can be explained, inter alia, by higher returns on capital in this sector of the economy. And thus, we can assume that the multiplier effect of the tertiary sector is greater than in other areas. But it is necessary to keep in mind that the autonomous cost multiplier works in the opposite direction, accelerating the economic decline during the economic cycle. That is why, in our opinion, measures of state regulation of the economy today should be increasingly aimed at regulating the tertiary sector to prevent the increasing cyclicality of the modern global economy, as the leading economic leaders themselves are often becoming generators of the business cycle due to economic financialization and tertiary sector growth in general.

References

[1] Ahadu E. Novel Corona Virus Covid-19: Impact on Economic Development and Mitigating Solution for Developing Countries. *Journal of Humanities and Social Sciences*, **8** (3) (2020), 86–91. doi: 10.11648/j.hss.20200803.11

[2] Regina S. *Effect of Covid-19 on economic growth*. Universitas Tarumanagara, 2020. doi: 10.17605/OSF.IO/QMP4V

[3] Maliszewska M., Mattoo A., van der Mensbrugghe D. *The Potential Impact of COVID-19 on GDP and Trade: A Preliminary Assessment.* Available at: http://documents1.worldbank.org/curated/en/295991586526445673/pdf/The-Potential-Impact-of-COVID-19-on-GDP-and-Trade-A-Preliminary-Assessment.pdf

[4] Stadnyk M. The impact of COVID-19 on the world economy. *Bulletin of IFRS*, **3** (2020). Available at: https://msfz.ligazakon.ua/ua/magazine_article/FZ002118 (in Ukrainian)

[5] Dolbneva D.V. Influence of COVID-19 on the economy of the world. *Problems of economy*, **1** (43) (2020), 20–26. doi: 10.32983/2222-0712-2020-1-20-26

[6] Filatova L.S., Bardadin O.A. Theory of cyclicity. *Investments: practice and experience*, **13** (2016), 79–82. Available at http://www.investplan.com.ua/?op=1&z=5080&i=12 (in Ukrainian)

[7] Romer D. Real-Business-Cycle Theory. In: *Advanced Macroeconomics*. McGraw-Hill, New York, 2011.

[8] Tivonchuk I.O., Steciuk P.I., Tyvonchuk O.I. Financial crises: an analysis of the causes and mechanisms of their mani-festation. *Visnyk Natsionalnoho universytetu "Lvivska politekhnika". Problemy ekonomiky ta upravlinnia*, **698** (2011), 112–118. Available at: http://ena.lp.edu.ua/bitstream/ntb/10914/1/16.pdf (in Ukrainian)

[9] Tkachenko A.M., Kalyuzhna Yu.V. Crisis: the nature, classification and causes. *Theoretical and practical aspects of economics and intellectual property,* **2** (1) (2013), 122–126. Available at: http://nbuv.gov.ua/UJRN/Tpaeiv_2013_1%282%29__27 (in Ukrainian)

[10] Perepiolkina O.O. Global financial crises in world economy. *Visnyk of Lviv Commercial Academy. Economics series*, **39** (2012), 129–134. Available at: http://nbuv.gov.ua/UJRN/Vlca_ekon_2012_39_31 (in Ukrainian)

[11] Pelyo A.B. The virtualization of global financial market as a major determinant of modern international monetary system development. *Theoretical and practical aspects of economy and intellectual property,* **3** (1) (2013), 159–163. doi: 10.31498/2225-6407.1.2013.21884 (in Ukrainian)

[12] Eichengreen B. *The Financial Crisis and Global Policy Reforms.* Available at: https://eml.berkeley.edu/~eichengr/finan_crisis_glob_pol_10-09.pdf

[13] Vieira F.V. The new international financial crisis: causes, consequences and perspectives. *Revista de Economia Politica*, **31** (2) (2011), 217–237. doi: 10.1590/s0101-31572011000200003

[14] Palamarchuk M.V. Global economic cycle and synchronization of the current world recession. *Economic Chronicle-XXI,* **3-4** (2011), 24–27. Available at: http://dspace.nbuv.gov.ua/bitstream/handle/123456789/47576/07-Palamarchuk.pdf (in Ukrainian)

[15] Bernanke B. The real effects of the financial crisis. Brookings papers on economic activity. In: BPEA Conference Draft, September 13-14, 2018. Available at: https://www.brookings.edu/wp-content/uploads/2018/09/BPEA_Fall2018_The-real-effects-of-the-financial-crisis.pdf

[16] Goldstein I., Goldstein A. Three branches of theories of financial crises. *Foundations and Trends in Finance,* **10** (2) (2015), 113–180. doi: 10.1561/0500000049

[17] Alvaro C. *Macroeconomic Foundations of Macroeconomics*. Routledge, London, 2005. doi: http://doi.org/10.4324/9780203022788

[18] *World Economic Outlook Update*, June 2020. Available at: https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020

[19] *Pandemic, Recession: The Global Economy in Crisis.* Global Economic Prospects. Available at: https://www.worldbank.org/en/publication/global-economic-prospects.

[20] Vasilchenko S.M., Malyshivsky T.V. The period of the global cycle of the financialized economy. *ScienceRise*, **2-3** (2019), 16-21. doi: 10.15587/2313-8416.2019.163103

[21] Vasylchenko S.M., Malyshivsky T.V. Regional stock markets and global economic cycles. *The actual problems of regional economy development*, **1** (15) (2019), 113–121. Available at: https://journals.pnu.edu.ua/index.php/aprde/article/view/2373 (in Ukrainian)

[22] *The World Factbook*. Available at: https://www.cia.gov/library/publications/the-world-factbook/fields/214.html#EE

[23] *World Economic Outlook Update,* June 2020. Available at: https: //www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020

[24] *Global Economic Prospects.* Available at: https://www.worldbank.org/en/publication/global-economic-prospects

[25] *UnctadStat.* Available at: https://unctadstat.unctad.org/EN/

[26] *The World Factbook.* Available at https://www.cia.gov/library/publications/the-world-factbook/fields/214.html#EE

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Михайлишин Лілія, Васильченко Сергій. Чому розвинені економіки стають вразливими до економічних циклів? *Журнал Прикарпатського університету імені Василя Стефаника*, **7** (3) (2020), 156–162.

В статті аналізуються можливі причини посилення циклічних коливань економік розвинутих країн світу в останнє десятиріччя. В той самий час країни що розвиваються та країни з ризиковими ринками (emerging markets and developing economies), зазнають менших втрат ВВП під час циклічних скорочень економіки. Це виглядає особливо парадоксально з огляду на те, що загальноприйнято вважати розвинуті економіки стійкішими та конкурентоспроможнішими. Крім того людство впродовж XX-го сторіччя нагромадило чималий досвід протидії циклічності національних економік і навчилось згладжувати амплітуду циклічних коливань. Автори статті висувають та обґрунтовують припущення про те, що причиною посилення амплітуди циклічних коливань, зростання глибини циклічних скорочень економік розвинутих країн у порівнянні з країнами що розвиваються і країнами з небезпечними ринками (emerging markets and developing economies), є суттєва відмінність у структурі економік цих країн. Значне переважання третинного сектору в розвинутих економіках робить їх вразливішими до циклічних коливань внаслідок більшого мультиплікаційного ефекту, який притаманний галузям третинного сектору порівняно с іншими секторами економіки. Проведений кореляційний аналіз показав наявність стійкого зв'язку між такими параметрами економіки як частка третинного сектору в економіці і відсоткове значення прогнозованого економічного спаду у 2020 року в розвинутих економіках країн світу та в країнах що розвиваються і країнах з небезпечними ринками (emerging markets and developing economies). Але треба пам'ятати, що мультиплікатор автономних витрат діє і у протилежному напрямку, прискорюючи падіння економіки в період економічного циклу. Саме тому, на наш погляд, заходи з державного регулювання економіки сьогодні мають бути спрямовані все більшою мірою на регулювання третинного сектору, аби запобігати посиленню циклічності сучасної глобальної економіки, оскільки провідні країни – економічні лідери все частіше самі стають генераторами ділового циклу внаслідок фінансіалізації економіки та росту третинного сектору взагалі.

Ключові слова: економічні цикли, темп економічного росту, структура економіки, третинний сектор, COVID-19.

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REVIEW

FOR A MONOGRAPH

IRYNA BORYSHKEVYCH,
VALENTYNA YAKUBIV

"MECHANISM OF FORMATION AND IMPLEMENTATION OF THE DEVELOPMENT STRATEGY OF AGRICULTURAL ENTERPRISES"

VALERY HRYNCHUTSKY

In today's conditions of increased risk of doing business, variability and instability of the external environment, acceleration of technological innovations and intensification of competition, strategic management plays an important role, as well as elaboration and implementation of an effective development strategy. The presence of the development strategy indicates the seriousness of the company's intentions towards its customers and partners, the focus on the long term goals. Forming a strategy is one of the most important tasks facing agricultural managers. The agricultural sector plays an important role in the development of the national economy of Ukraine in general. Managers of agricultural enterprises, first of all, need to focus not on solving current problems, but on the implementation of long-term projects that will ensure this development.

The strategy is a roadmap for agricultural enterprises, enabling forming clear strategic, tactical, and operational goals, appointing responsible executors, and adhering to the set deadlines. The problem of many modern agricultural enterprises is the leaders' misunderstanding of the importance of strategic planning. Some of them either do not carry out strategic management or carry it out only formally. However, the strategy should not be a perfectly formed plan that will not be applied. It has to be implemented.

The monographic study consists of three consecutive and complementary sections, which reveal the theoretical and methodological foundations of agricultural development strategy, the process of strategic management, the importance of increasing competitive advantages for business success in the market, trends in agricultural development and strategic analysis of their development, the use of a balanced system of economic indicators to determine the level of strategic capacity of agricultural enterprises. Also a model strategy is developed by the method of Hoshin Kanri. A mechanism for forming and implementing a strategy for the development of agricultural enterprises is elaborated.

The first section – "Theoretical foundations of agricultural enterprise development strategy" – explores the interpretation of the concept "strategy" by different scientists, analyzes approaches to defining the essence of strategy, offers its interpretation of the term "agricultural development strategy", that is a purposeful, detailed, orderly and long-term action plan, which integrates a set of rules and guidelines forming a clear line of behavior of agricultural enterprises in the gradual achievement of goals, meeting consumer needs and economic and social benefits, as well as ensuring agricultural growth in the country as a whole. The classification of strategies of agricultural enterprises is summarized and supplemented, the main approaches to the process of strategic management are highlighted, the methodology for formation of agricultural enterprises' strategy for obtaining competitive advantages is considered, and the main elements of competitiveness of agricultural enterprises in modern conditions are formed.

The second section – "Analysis of trends in the strategic development of agricultural enterprises" – explores some aspects of the analysis of agricultural enterprises of Ukraine and Ivano-Frankivsk region, analyzes the main trends of their strategic development and the features of strategy formation and implementation in agricultural enterprises by conducting surveys on organizational and legal forms of management in Ivano-Frankivsk region. A comprehensive strategic analysis of prospects for the development of agricultural enterprises is done using the following tools: PEST-analysis, SWOT-analysis and TELESCOPIC OBSERVATIONS.

The third section – "Mechanism of strategic planning of agricultural enterprises" – proposes a balanced system of economic indicators to determine the level of strategic capacity of agricultural enterprises, by which the authors understand "existing opportunities and needs for strategic analysis and strategy development". A typical strategy for agricultural development is elaborated by the method of Hoshin Kanri, the mechanism of formation and implementation of the strategy in agricultural enterprises is proposed and the process of strategic planning is modeled on the example of the agricultural enterprise "Ridna Zemlya".

The monograph is a completed independent scientific research, which is performed on an important topic and contains scientific and practical value. Of practical importance is that the managers of agricultural enterprises can use the mechanism of the formation and implementation of development strategies proposed by the authors for the successful implementation of strategic management, taking into account the level of strategic capacity of the agricultural enterprise. The authors' proceedings will contribute to the development of an effective strategy to ensure a timely response to changes in the internal and external environment, efficient use of available resources, increasing competitive advantages and achieving sustainable economic growth in the long run.

The monograph is characterized by scientific novelty, which also testifies to the deep knowledge of the authors with the theoretical and practical aspects of strategic management. It will be useful for economic professionals, as well as professionals who address the formation and implementation of strategies for the development of agricultural enterprises at the scientific and practical levels.

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