

УДК 005.12:[330.34+658.589:63(1)]

DOI: 10.30857/2786-5398.2022.2.6

Yuriy I. Danko

Sumy National Agrarian University, Ukraine

**FORMATION OF VECTORS OF MANAGEMENT OF BUSINESS
DEVELOPMENT OF RURAL AREAS**

The article presents the results of research on the main indicators of business development management in rural areas. Accordingly, the theoretical and methodological principles of modeling rural business development management are formed and substantiated, in particular, the main problems of rural business structures development are identified, vectors in managing the development of existing rural potential are identified, approaches, methods, modeling tools are determined, which facilitates their selection and application. As a result of the study, a system of indicators for assessing the processes of differentiation of business development management, which comprehensively reflects its main characteristics, and is based on the calculation of an integrated indicator to assess the level of diversification of rural business, identify its parameters get options for combining results with the selection of alternative activities. The necessity of creating centers of economic growth by stimulating the development of innovative entrepreneurship in rural areas is substantiated and proved, first of all, due to the processes of diversification of business development management taking into account the specifics of a particular rural area. as well as their continuous improvement for the full use of the potential of each rural enterprise individually and the comprehensive development of local communities, increase new jobs, increase the competitiveness of rural areas and more.

Keywords: *rural areas; business development management models; differentiation of business management processes; innovative entrepreneurship; economical development.*

Юрій І. Данько

Сумський національний аграрний університет, Україна

**ФОРМУВАННЯ ВЕКТОРІВ УПРАВЛІННЯ РОЗВИТКОМ БІЗНЕСУ
СІЛЬСЬКИХ ТЕРИТОРІЙ**

У статті наведено результати досліджень, щодо основних індикаторів управління розвитком бізнесу сільських територій. Відповідно сформовано та обґрунтовано теоретико-методичні засади моделювання управління розвитком бізнесу сільських територій, зокрема виявлено основні проблеми розвитку бізнес-структур сільських територій, означено вектори в управлінні розвитком наявного потенціалу сільських територій, детерміновано підходи, методи, інструментарій моделювання, що полегшує їх вибір та застосування. В результаті проведеного дослідження запропоновано систему показників оцінювання процесів диференціації управління розвитком бізнесу, яка комплексно відображає його основні характеристики, та базується на розрахунку інтегрального показника, що дозволяє оцінити рівень диверсифікації бізнесу сільських територій, виявити її параметри, охарактеризовані як кількісно, так і якісно, і отримати варіанти поєднання результатів з виділенням альтернативних видів діяльності. Обґрунтовано і доведено необхідність створення осередків економічного зростання через стимулювання розвитку інноваційного підприємництва у сільських регіонах, насамперед, за рахунок процесів диверсифікації управління розвитком бізнесу з врахуванням специфіки конкретної сільської місцевості. а також їх постійного вдосконалення для повноцінного використання потенціалів кожного сільського підприємства окремо та всебічного розвитку територіальних громад, збільшення нових робочих місць, підвищенню конкурентоспроможності сільських регіонів тощо.

Ключові слова: сільські території; моделі управління розвитком бізнесу; диференціація процесів управління бізнесом; інноваційне підприємництво; економічний розвиток.

Юрій І. Данько

Сумської національний аграрний університет, Україна

ФОРМИРОВАНИЕ ВЕКТОРОВ УПРАВЛЕНИЯ РАЗВИТИЕМ БИЗНЕСА СЕЛЬСКИХ ТЕРРИТОРИЙ

В статье приведены результаты исследований относительно основных индикаторов управления развитием бизнеса сельских территорий. Соответственно сформированы и обоснованы теоретико-методические основы моделирования управления развитием бизнеса сельских территорий, в частности выявлены основные проблемы развития бизнес-структур сельских территорий, указаны векторы в управлении развитием имеющегося потенциала сельских территорий, детерминированы подходы, методы, инструментарий моделирования, что облегчает. В результате проведенного исследования предложена система показателей оценки процессов дифференциации управления развитием бизнеса, комплексно отражающая его основные характеристики, и базирующаяся на расчете интегрального показателя, позволяющего оценить уровень диверсификации бизнеса сельских территорий, выявить ее параметры, охарактеризованные как количественно, так и качественно, и получить варианты сочетания результатов с выделением альтернативных видов деятельности. Обоснована и доказана необходимость создания ячеек экономического роста через стимулирование развития инновационного предпринимательства в сельских регионах прежде всего за счет процессов диверсификации управления развитием бизнеса с учетом специфики конкретной сельской местности. а также их постоянного усовершенствования для полноценного использования потенциалов каждого сельского предприятия отдельно и всестороннего развития территориальных общин, увеличения новых рабочих мест, повышения конкурентоспособности сельских регионов и т.д.

Ключевые слова: сельские территории; модели управления развитием бизнеса; дифференциация процессов управления бизнесом; инновационное предпринимательство; экономическое развитие.

Problem statement. The problems of sustainable development of rural areas, preserving their integrity to perform their basic functions and creating favorable conditions for life and activities of the rural population continue to be among the urgent problems and need to be addressed.

Analysis of recent research and publications. In scientific researches of domestic and foreign authors [1, p. 47] various directions of management of development of business of rural territories which include as information concerning introduction of modern tools of development of an agroindustrial complex, agriculture, development of actions for preservation of natural resource potential are presented. territories and its rational use, modernization and renewal of production and social infrastructure of the village, development of cooperation, rural tourism, labor market, active training and retraining in rural areas, and other areas, the implementation of which, according to scientists, will help solve one of the key tasks of the state – the preservation of rural areas not only as an agrosystem and economic space, but also the social environment with its inherent components – rural population, social sphere and infrastructure, as well as an environment that differs in quantitative and qualitative characteristics from urban areas [2, p. 13].

Previously unresolved parts of the study. According to many scientists, the diversification of the development management processes of enterprises located in rural areas has been identified as the main tool by which it is possible to achieve the set goals.

However, in general, the results show that the food market still has a rather acute problem of imbalance in some types of production, monopolization of certain markets and a fairly high level of unemployment in rural areas. The economy of rural areas, compared to the economy of cities, is less stable, especially during periods of crop failure and recession. It is known that in agriculture there may be a sharp unforeseen reduction in production due to external factors, especially – climatic, which indicates a high probability of additional risks not typical of other industries. In this regard, the development of agricultural economic activities in rural areas is of particular importance. It is in this direction that measures of state support for the economy of rural areas in advanced countries are being developed [3, p. 170].

The purpose of the study is to determine the main vectors of management of rural business development.

Presentation of the main results. In Ukraine, non-core industries in the rural economy are poorly developed. Underestimation of non-agricultural development opportunities can eventually lead to serious negative socio-economic effects, such as further reductions in rural incomes and living standards, mass closures, rising unemployment, and increased migration in more socially favorable areas – economic conditions.

Therefore, in the "Concept of sustainable development of rural areas of Ukraine until 2030" diversification is considered as one of the vector to increase the sustainability of rural development, as well as technological renewal of industries and individual sectors of the rural economy [4].

However, this concept focuses on the problem itself, but does not offer an integrated approach that could create a basis for the systematic development of new areas of rural development. This necessitates a revision of existing theoretical concepts of diversification. As a tool to eliminate the disparities in the reproduction and redistribution of resources, the diversification of the rural economy pursues different goals and generally determines the direction of rural development. The diversification processes implemented in rural areas contribute, on the one hand, to solving the problem of rational use of their resources and involvement in production turnover, and on the other hand – aimed at efficient allocation of resources between alternative uses.

In other words, the transition from a one-sided structure of the rural economy to a multidisciplinary economy involves the development of new activities, more rational use of available resources, so diversified rural areas as a whole are more stable, competitive compared to others [5, p. 230]. In this regard there is a need to determine the role of production and economic and overall resource potential of rural areas, where the processes of diversification of business development management, in order to develop priority areas of economic and social development of rural areas. the main thing is to ensure the achievement of a high level and quality of life of rural residents.

Diversification as a process and as a characteristic of the structure of the rural economy is directly related to the rational use of resources and their most efficient distribution between alternatives, it is important to determine the availability, composition and volume of available resources in rural areas [6].

Taking into account the above, it is logical to consider the diversification of the economy as "the process of structural transformation of the economy, accompanied by a shift of resources from the primary sector to the secondary (processing) and tertiary (service) sectors" [7, p. 113]. It is as a result of the process that the state of diversity of the results of the national economy is intensifying. At the micro level, the process of diversification of business development management means the expansion of production activities of individual economic units – enterprises and households. According to this approach, the process of diversification includes various elements, the main of which are: levels, strategies, directions.

Considering the processes of diversification of business development management in rural areas, it should be noted that the main industries in rural areas are crop production and animal

husbandry. Such enterprises traditionally specialize in the production of raw materials and perform the function of resource provision of other industries in which various goods and services are produced. The emergence of diversification in the economy is due to the laws of the market, the development of productive forces and industrial relations [8]. As a tool for the transition from traditional to alternative activities, the processes of diversification of business development management determine the direction of restructuring of business processes of enterprises and, ultimately, focused on improving the quality of life rural population. Therefore, rural diversification is more influenced by the need for appropriate use of available resources of the territory, not just their structural composition and availability [8, p. 113]. The problem of diversification of business development management in rural areas is multifaceted and scientifically related to the solution of methodological issues of its diagnosis. At the same time, it should be noted that there are no developed approaches to the assessment of diversification at the level of rural municipalities, although at the regional level such an assessment is conducted. As a rule, in foreign scientific works the level of regional diversification of business development management is estimated on the basis of indicators that characterize the sectoral structure of the economy. One of the main indicators is employment, which reflects the trends in the economy and does not depend on cost indicators. As for the Ukrainian conditions, there are difficulties with the use of this indicator, because due to the peculiarities of the labor market, low mobility of the population, a significant amount of hidden employment, it does not fully reflect the current situation in the economy. Available statistics on the structure of employment in the regional context are presented in a generalized form for some areas of activity, which do not change significantly over time. Regional differences relate mainly to mining, manufacturing and agriculture. Gross value added can be another indicator for assessing the level of diversification of the region's economy. In Ukrainian practice, another indicator is used – gross regional product, which is the sum of gross value added at comparable prices. Difficulties in accounting for value added in the regions are due to the fact that it is not always registered at the place of its receipt. However, there is no other alternative to gross value added in regional calculations. Currently, scientists have formed an understanding of the importance of assessing the level of regional diversification, which reveals asymmetry in the structure of the economy, taking into account the changes taking place in it [9]. In this regard, the following approaches are most widely used in conducting econometric estimates in regional studies of foreign authors: the method of structural shifts, entropy coefficient, Herfindahl coefficient, Hatchman coefficient [10]. The method of structural shifts is one of the most popular methods of analysis of regional development [10]. In this approach, the growth of the regional indicator is divided into three main components: the national component (national shift), the component of the sectoral structure (sectoral shift) and the regional component (regional shift). The national component of NY_{if}^t for each sector (i) is calculated as part of the increase in year t of each indicator at the meso level (E_f) in proportion to the growth of the same indicator at the macro level (E):

$$NY_{if}^t = E^{t-1} \frac{E_f^t}{E_f^{t-1}}. \quad (1)$$

The sectoral component of OY_{if}^t – is the share of growth of sector-specific indicators at the regional level, reflecting their possible growth for each sector of the economy at the meso level (rural area), if the rate of change of indicators will correspond to macroeconomic growth rates:

$$OY_{if}^t = E_{if}^{t-1} \left(\frac{E_{iF}^t}{E_{iF}^{t-1}} - \frac{E_F^t}{E_F^{t-1}} \right). \quad (2)$$

The regional shift RY_{if}^t shows the difference between the values of real and projected growth of this indicator with an equal increase in the share of the sector at the meso and macro levels:

$$RY_{if}^t = E_{if}^{t-1} \left(\frac{E_{if}^t}{E_{if}^{t-1}} - \frac{E_{iF}^t}{E_{iF}^{t-1}} \right). \quad (3)$$

The total increase in the regional indicator is the sum of three main components:

$$E_{if}^t - E_{if}^{t-1} = NY_{if}^t + OY_{if}^t + RY_{if}^t. \quad (4)$$

Carrying out such an assessment by sectors allows to divide into components the total indicator by region and to give an assessment to each of the components of the analyzed indicator: national, regional and sectoral. Also among the common ways to assess the diversification of the economy is the entropy index (entropy index), which is calculated by the following formula:

$$S = \sum_{i=1}^m Y_i \ln \frac{1}{Y_i}, \quad (5)$$

where m – the total number of sectors of the economy;
 Y_i – is the share of each sector in their total volume.

This ratio estimates the degree of diversification of the economy, focusing on the proportional distribution of its sectors. The high value of the indicator indicates a significant level of diversification, low – the specialization of the economy. The minimum value of the entropy coefficient (zero) can be obtained in cases where specialization is maximum and all activities are concentrated in one sector. Conversely, the maximum value of the coefficient is achieved with a uniform distribution, when the shares of all sectors are equal.

Some scholars use approaches to assess the level of diversification of the region's economy [11]. Thus, V. Shcherbak, L. Hanushchak-Yefimenko, O. Nifatova [11] applies the structural coefficient of value added of a particular type of economic activity in the gross regional product, which is defined as the fraction of the share of value added in the gross regional product of a particular region (dr) on the share of value added of this species in the country as a whole (drf):

$$CK = \frac{dr}{drf}. \quad (6)$$

In order to identify the degree of diversification of the regional economy, the author proposes to calculate the homogeneity of the values of structural coefficients based on analysis of variance. In this case, the conclusion about the level of diversification is based on the amount of variance (D) structural coefficient (CK): high values of variance indicate the specialization of the economy, and low – its diversification. Also, to assess the structure of the economy of rural areas by the share of value added of each type of business processes used V. Salnikov's proposed coefficient of sectoral diversification, which shows the diversity of types of business processes in the territory. It is calculated as the inverse of the Herfindahl index, according to the following formula:

$$KD = \frac{I}{\sum_{i=1}^m Y_i^2} \quad (7)$$

The value of the coefficient of sectoral diversification takes into account the diversity of economic activities in the region (rural area) and allows you to conditionally assess the sustainability of its development, as well as the risks involved. "The higher the value of the sectoral diversification rate, the greater the sustainability and the less risk; the lower it is, the more significant the impact on the economy can have a decline in production or activity in the region's leading activities" [1]. At the same time, the scale of the estimated economic system is not taken into account when calculating the entropy coefficients, sectoral diversification and the Herfindahl index. In contrast, the Hetchman coefficient and the method of structural shifts allow us to compare the level of diversification and scale of the analyzed region with some reference value. Table 1 shows a comparative description of the above foreign and Ukrainian approaches to the study of the regional level of diversification. The systematization of methodological approaches showed the diversity of existing assessment indicators and methods of calculating the level of diversification, as well as revealed the importance of approaches for the regional level. But, as a rule, such an assessment is rarely used at the level of rural areas in general and does not affect the development of diversification processes in rural areas, which is due primarily to the lack of statistical information. There is a need to develop a methodology for diagnosing the diversification of business processes of rural enterprises, which combines the assessment of resource potential of rural areas and identify possible areas for diversification of enterprises taking into account the integrated use of resources [12].

Table 1

Characteristics of approaches to the study of the level of diversification of business development management in rural areas

Method of structural changes	Coefficient Hatchman's	Coefficient of diversification of the economy	Coefficient Herfindahl	Coefficient of sectoral diversification of the economy	Coefficient entropy
<i>Method of calculation</i>					
complex, correlation with the reference value		without correlation with the reference value			
<i>Indicators for calculation</i>					
Indicators that characterize the structure of the economy at the meso and macro levels	Coefficient of localization of production	The share of value added of a particular type of economic activity in gross regional product			
<i>Essential characteristics</i>					
Distribution and assessment of the contribution of components to the total regional indicator	Correlation of the regional structure with the national one	Determining the degree of diversification of the economy based on analysis of variance	Identification of the predominant sector in the regional structure of the economy	Measuring the sustainability of economic development, taking into account sectoral diversification	Determining the degree of diversification of the economy, taking into account the proportional distribution of its industries

End table 1

Method of structural changes	Coefficient Hatchman's	Coefficient of diversification of the economy	Coefficient Herfindahl	Coefficient of sectoral diversification of the economy	Coefficient entropy
<i>The value of the resulting indicator</i>					
positive value – the structure is more effective at the meso level, negative value – at the macro level	from 0 to 1; 0 – regional structure is completely different, 1 – regional structure is fully consistent	high value – specialization of the economy, low value – the diversification of the economy	high value – diversified economy, low value – specialized economy	high value – the stability of economic development, low value – instability	from 0 to 1; 0 – various industries are developing, 1 – one industry is developing

Source: author's development.

Taking into account the changes in the rural sectoral structure, a method of diagnosing the level of diversification of business development management in rural areas was proposed, which consists of the following main stages: selection of necessary indicators characterizing the availability and use of resources in rural areas; and selection of the most promising for rural areas, development of measures for further development of business processes of enterprises in rural areas. Extended stages of diagnosis are presented in Fig. 1.

STAGES OF DIAGNOSIS
1. Selection of indicators that characterize the human, social and economic resources of the territory
2. Calculation of individual indices to ensure data comparability
3. Identification of weights of significance of each indicator on the basis of correlation-regression analysis
4. Defining groups and a list of areas for diversification of business by assessing the sectoral structure of the economy: 4.1. Agricultural: traditional and lost 4.2. Non-agricultural: industry and construction, forestry, handicrafts and handicrafts 4.3. Sphere of services: education, health care, recreation, consumer services
5. Conducting expert assessment of each group of areas of diversification in order to identify the most significant of them
6. Construction of a matrix model and determination of the integrated level of diversification
7. Grouping of rural areas according to the level of business diversification
8. Substantiation of directions and development of measures for further development of business in rural areas

Source: author's development.

Fig. 1. Algorithm for diagnostics of diversification of rural business development management

Currently, the idea of the processes of diversification of business development management in rural areas is formed as agrarian activity, due to the predominance of agriculture in the structure of economic activity. The diversification of the rural economy expands, the role of the agricultural sector gradually declines, and the "agrocentric" understanding of the rural economy becomes

illegitimate as its underlying industries (agriculture and forestry) cease to be the main areas of employment and income in rural areas. The flow of basic resources from the agricultural sector to other areas is explained by the fact that in other sectors of the economy higher profitability, better working conditions and attractiveness, opportunities for innovation [13].

Following the proposed algorithm, resources (human, social, economic) were selected that characterize the potential of the territory, the use of which will create a new structure of the rural economy with different activities [13].

The methodological approach to assessing the diversification of rural development management will take into account the available resources of the territory and opportunities for their use, will identify the main areas of diversification, which will promote the best use of rural business potential, development of alternative sectors of rural economy.

References

1. Zabaznova, T., Karpushova, S., Patsyuk, E., Surkova, O., Khmeleva, G. (2014). Mechanism of Rural Entrepreneurship Development on the Base of Micro-business. *Asian Social Science*, 10: 168–177. DOI: 10.5539/ass.v10n23p168.
2. Klofsten, M., Norrman, C., Cadorin, E. et al. (2020). Support and development of small and new firms in rural areas: a case study of three regional initiatives. *SN Appl. Sci.* 2(110). <https://doi.org/10.1007/s42452-019-1908-z>.
3. Shanin, O. V. (2015). Kontseptsiiia selo utvoriuiuchoho pidpriemstva v systemi rozvytku silskykh terytorii [The concept of the village-forming enterprise in the system of rural development]. *Efektivna ekonomika = Efficient economy*, № 4. URL: <http://www.economy.nayka.com.ua/?op=1&z=3996> [in Ukrainian].
4. Kontseptsiiia rozvytku silskykh terytorii: Rozporiadzhennia Kabinetu Ministriv Ukrainy № 995-r vid 23.09.2015 [The concept of rural development: Order of the Cabinet of Ministers of Ukraine № 995-r from 09/23/2015]. URL: <http://zakon2.rada.gov.ua/laws/show/995-2015-r> [in Ukrainian].
5. Pavlov, O. I. (2009). Silski terytorii Ukrainy: funktsionalno-upravlinska model: monohr. [Rural territories of Ukraine: functional-administrative model: monograph]. Odesa. 344 p. [in Ukrainian].
6. Pro zatverdzhennia planu zakhodiv z realizatsii Kontseptsii rozvytku silskykh terytorii: Rozporiadzhennia Kabinetu Ministriv Ukrainy № 489-r vid 19.07.2017 [On approval of the action plan for the implementation of the Concept of Rural Development: Order of the Cabinet of Ministers of

Література

1. Zabaznova T., Karpushova S., Patsyuk E., Surkova O., Khmeleva G. Mechanism of Rural Entrepreneurship Development on the Base of Micro-business. *Asian Social Science*. 2014. 10. 168–177. DOI: 10.5539/ass.v10n23p168.
2. Klofsten M., Norrman C., Cadorin E. et al. Support and development of small and new firms in rural areas: a case study of three regional initiatives. *SN Appl. Sci.* 2020. 2(1102020). <https://doi.org/10.1007/s42452-019-1908-z>.
3. Шанін О. В. Концепція село утворюючого підприємства в системі розвитку сільських територій. *Ефективна економіка*. 2015. № 4. URL: <http://www.economy.nayka.com.ua/?op=1&z=3996>.
4. Концепція розвитку сільських територій: Розпорядження Кабінету Міністрів України № 995-р від 23.09.2015. URL: <http://zakon2.rada.gov.ua/laws/show/995-2015-p>.
5. Павлов О. І. Сільські території України: функціонально-управлінська модель: моногр. Одеса, 2009. 344 с.
6. Про затвердження плану заходів з реалізації Концепції розвитку сільських територій: Розпорядження Кабінету Міністрів України № 489-р від 19.07.2017. URL: <https://zakon.rada.gov.ua/laws/show/ru/489-2017-%D1%80#n8>.

- Ukraine № 489-r of 07/19/2017]. URL: <https://zakon.rada.gov.ua/laws/show/ru/489-2017-%D1%80#n8> [in Ukrainian].
7. Ruda, L. P. (2014). Silski terytorii u modeli rozvytku ahrarnoho sektoru: dys. ... kand. ekon. nauk: 08.00.03 [Rural areas in the model of agricultural sector development: dissertation of the candidate of economic sciences: 08.00.03]. Vinnytsia National Technical University [in Ukrainian].
7. Руда Л. П. Сільські території у моделі розвитку аграрного сектору: дис. ... канд. екон. наук: 08.00.03. Вінницький національний технічний університет. Вінниця, 2014.
8. Taraniuk, L. M. (2011). Metodolohiia reinzhynirynhu biznes-protseviv promyslovykh pidpriemstv [Methodology of business process reengineering of industrial enterprises]. *Mekhanizm rehuliuвання ekonomiky = Mechanism of economic regulation*, № 1, P. 111–119 [in Ukrainian].
8. Таранюк Л. М. Методологія реінжинірингу бізнес-процесів промислових підприємств. *Механізм регулювання економіки*. 2011. № 1. С. 111–119.
9. Kharitonov, S. P., Gusev, N. M. Printsipy postroyeniya biznes-protseviv na promyshlennom predpriyatii [Principles of building business processes in an industrial enterprise]. URL: <https://refdb.ru/look/1455884.html> [in Russian].
9. Харитонов С. П., Гусев Н. М. Принципы построения бизнес-процесов на промышленном предприятии. URL: <https://refdb.ru/look/1455884.html>.
10. Samborskyi, O., Isai, O., Hnatenko, I., Parkhomenko, O., Rubezhanska, V., Yershova, O. (2020). Modeling of foreign direct investment impact on economic growth in a free market. *Accounting*, 6, P. 705–712.
10. Samborskyi O., Isai O., Hnatenko I., Parkhomenko O., Rubezhanska V., Yershova O. Modeling of foreign direct investment impact on economic growth in a free market. *Accounting*. 2020. 6. P. 705–712.
11. Shcherbak, V., Ganushchak-Yefimenko, L., Nifatova, O., Fastovets, N., Plysenko, G., Lutay, L., Tkachuk, V., Ptashchenko, O. (2020). Use of key indicators to monitor sustainable development of rural areas. *Global Journal of Environmental Science and Management (GJESM)*, Vol. 6, Iss. 2, P. 175–190. <http://dx.doi.org/10.22034/gjesm.2020.02.04>.
11. Shcherbak V., Ganushchak-Yefimenko L., Nifatova O., Fastovets N., Plysenko G., Lutay L., Tkachuk V., Ptashchenko O. Use of key indicators to monitor sustainable development of rural areas. *Global Journal of Environmental Science and Management (GJESM)*. 2020. Vol. 6, Iss. 2. P. 175–190. <http://dx.doi.org/10.22034/gjesm.2020.02.04>.
12. Waseem Afzal (2012). Management of Information Organizations. 1st Edition. Chandos Publishing, Published Date: 18th June 2012, Page Count: 180 <https://www.sciencedirect.com/topics/computer-science/process-management>.
12. Waseem Afzal. Management of Information Organizations. 1st Edition. Chandos Publishing, Published Date: 18th June 2012. Page Count: 180. <https://www.sciencedirect.com/topics/computer-science/process-management>.
13. Kozachenko, A. V. (2010). Practical approaches to improving business processes. URL: <http://easy-code.com.ua/2010/11/praktichni-pidxodi-do-polipshennya-biznes-procesiv/>.
13. Козаченко А. В. Практические подходы к улучшению бизнес-процессов. URL: <http://easy-code.com.ua/2010/11/praktichni-pidxodi-do-polipshennya-biznes-procesiv/>.