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MANAGEMENT OF SOCIAL AND ECONOMIC STAKEHOLDERS ENGAGEMENT IN BUSINESS ENVIRONMENT

Abstract. Social and economic stakeholders engagement in business environment is one of the decisive factors in the development of enterprises, a catalyst for the creation of image-building, social and economic outcomes. Stakeholder engagement management is aimed at achieving the mission and strategic goals of enterprise development. The effectiveness of stakeholder engagement management depends on the validity and coherence of management decisions developed with the help of appropriate methods. The task of forming a holistic concept and developing adequate tools for managing social and economic relationship is important and timely taking into account the existence of certain gaps in the research of this problem.

The paper presents the results of the research on the state of socio-economic stakeholders engagement, identifies the factors of influence and proposes the concept of constructing management tools for the engagement. The developed methodical approach to forecasting of social and economic development of enterprises on the basis of the econometric model can serve as one of such tools of stakeholders' engagement management. The model covers three structural equations that describe the dependence of image-building, social and economic performance of enterprises on a number of independent variables, for the construction of which the data of non-financial reports of enterprises should be used, the formation of which is currently not regulated by normative acts of Ukraine. It is recommended to use expert methods to establish numerical values of indicators of social and economic interaction.

Keywords: engagement, stakeholders, concept of management, development, goals, results, methods.

JEL classification: M1, M2

Formulas: 3; fig.: 2; tabl.: 1; bibl.: 13.

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УПРАВЛІННЯ СОЦІАЛЬНО-ЕКОНОМІЧНОЮ ВЗАЄМОДІЄЮ СТЕЙКХОЛДЕРІВ У БІЗНЕС-СЕРЕДОВИЩІ

Анотація. У статті розглянуто зміст, завдання і послідовність управління соціальноекономічною взаємодією стейкхолдерів як визначальним фактором сталого розвитку суб'єктів господарювання, каталізатором виникнення іміджевого, соціального та економічного результатів. Проаналізовано методи управління взаємодією заінтересованих сторін у бізнес-середовищі, що спрямовані на досягнення місії підприємства, і слугують інструментом розроблення та впровадження узгоджених із стейкхолдерами управлінських рішень. Досліджено вплив взаємодії на результативність діяльності підприємств. Розроблено концепцію та побудовано економетричну модель прогнозування соціально-економічної взаємодії заінтересованих сторін, що є актуальним і важливим з огляду на наявність певних прогалин в наукових дослідженнях за окресленою проблемою.

Ключові слова: взаємодія, стейкхолдери, концепція управління, розвиток, цілі, результати, методи.

Формул: 3; рис.: 2; табл.: 1; бібл.: 13.

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УПРАВЛЕНИЕ СОЦИАЛЬНО-ЭКОНОМИЧЕСКИМ ВЗАИМОДЕЙСТВИЕМ СТЕЙКХОЛДЕРОВ В БИЗНЕС-ПРОСТРАНСТВЕ

Аннотация. В статье рассмотрены содержание, задачи и последовательность управления социально-экономическим взаимодействием стейкхолдеров как определяющим фактором устойчивого развития субъектов хозяйствования, катализатором возникновения имиджевого, социального и экономического результатов. Проанализированы методы управления взаимодействием заинтересованных сторон в бизнес-среде, которые направлены на достижение миссии предприятия, и служат инструментом разработки и внедрения согласованных со стейкхолдерами управленческих решений. Исследовано влияние взаимодействия на результативность деятельности предприятий. Разработана концепция и модель прогнозирования построена эконометрическая социально-экономического взаимодействия заинтересованных сторон, что безусловно является актуальным и важным, учитывая наличие определенных пробелов в научных исследованиях касательно этой проблемы.

Ключевые слова: взаимодействие, стейкхолдеры, концепция управления, развитие, цели, результаты, методы.

Формул: 3; рис.: 2; табл.: 1; библ.: 13.

Introduction. Permanent development of the enterprise as a focused and managed process of quantitative, qualitative and structural changes in its state to achieve a set mission in a changing business environment requires the application of adequate management tools (methods).

An important task that arises in this case is the establishment of responsible stakeholders engagement with the coordination of their interests. The effectiveness of such engagement with regard to the development of enterprises can be characterized using single or integral (aggregated) indicators of economic, social and image-building results [1-2].

The task of constructing an adequate system of assessment indicators and developing methods for managing stakeholders engagement on its basis, as well as their use in the process of managing enterprises development, is complex and topical taking into account versatility of the process of social and economic development, the existence of correlation between the performance and the interaction of enterprises with business environment, as well as the existence of certain gaps in the conceptual and methodological solution to this problem.

Research analysis and research objective. Important scientific and practical tasks of management of enterprises social and economic development are investigated in the works [3-5], and the toolkit for the diagnosis of enterprises performance is proposed. In the works [3; 6] problems are outlined and methods and models for assessing the state and management of enterprises development are provided.

The tools for managing proactive business development, as well as methods for evaluating and planning development, are described in work [7]. The results of research on the social component of development and the construction of methods for assessing stakeholders engagement are presented in [2].

Despite the existence of a large number of studies covering various aspects of the problem of enterprise development management, the tasks of framing an integrated concept for the development of a methodical provision for the management process and, in particular, adequate methods and models for forecasting enterprises development, taking into account the influence of stakeholders engagement on the final results, are important and need further resolution.

The purpose of the study is to develop a concept of management of socio-economic interaction in enterprises and build an economic and mathematical model for forecasting enterprises development on its basis. To solve the problem and achieve the purpose of the study, general scientific methods of system analysis and synthesis, as well as special methods of correlation-regression analysis and econometric modeling were used.

Research results. Parties to engagement in the business environment are interested persons or groups of persons (stakeholders) that influence and are influenced by managerial decisions of the business entity.

In the process of engagement, each party seeks to achieve its objective: environment - preservation and reproduction of the ecosystem; internal environment – ensuring enterprise economic development in compliance with the provisions on socially responsible activities; external environment – balancing economic and social interests.

The objectives of the parties of engagement can be both complementary and contradictory, respectively, the aim of social and economic engagement can be considered to be their concerted achievement (Fig. 1).

The main factors influencing the achievement of the objectives of the parties to the engagement should include: natural and man-made phenomena and processes, consumer behavior, personnel loyalty, technology perfection, resources provision, corporate culture, social and economic transformation processes, favorable business environment, innovative attractiveness, complementarity of the state management, local self-government of civic organizations, mass media, etc. Failure to take into account the effects of these factors may impact risks to achieving development goals.

Social and economic interaction of enterprises with business environment is based on the methodological principles of socially responsible activities – voluntariness, conviction, partnership, coherence, openness, trust, conformity, obligation, ethics. Compliance with the above principles means that a socially responsible enterprise is a conscious taxpayer, adheres to the rules of the current legislation on business activities, seeks to prevent the negative impact of production activity on the ecosystem, promotes staff development and increases the quality of life of population.

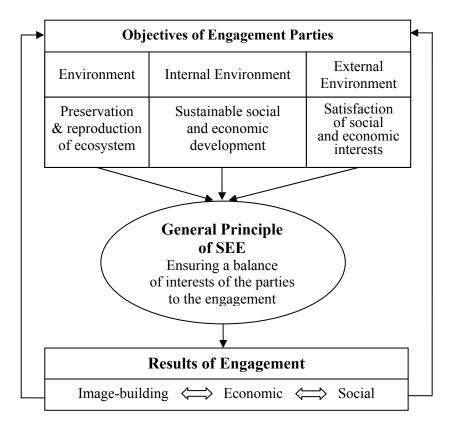


Fig. 1. Objectives and results of social and economic interaction of enterprises in business environment* *Source: [2].

The maintenance of the balance of stakeholders interests leads to image-building, social and economic results, which in turn form the basis for achieving the parties goals, promote the improvement and development of business, that is confirmed by the experience of foreign and domestic socially responsible enterprises [1; 8; 9]. Thus, according to a study on more than 200 companies conducted by the Economist Intelligence Unit, their responsible social and economic engagement provides for efficiency (economic), both in the short-term and in the long-term perspective. As for Ukrainian enterprises, according to the Center for Development of Corporate Social Responsibility, almost half of surveyed enterprises note the improvement of their economic performance, over 60% – a meaningful impact on the development of regional community, and 70% – increase in staff loyalty [8].

However, stakeholders engagement in the business space of Ukraine is unlikely to be evaluated as satisfactory, since according to the index of economic freedom (2014 - 49.3; 2015 - 46.9; 2016 - 46.8), the national economy belongs to the group of «repressive, not free», and according to the CPI corruption index (2014 - 26; 2015 - 27; 2016 - 29) – to the «shame for the nation» group. Detailed and thorough description of the social and economic stockholders engagement with the study of its impact on the state of ecosystem, living standards of population and the development of local community is given in paper [2].

In the judgement of a number of domestic and foreign scientists – M. Porter, F. Kotler, B. Andrushkiv, A. Kolot, N. Kyzym, N. Shmyhol, O. Teletov, A. Dudkin and others, the process of SEE guarantees image-building and social results. According to the data from [5; 8; 9] the most important image-building results include: enhancing the public image of quality products producer, created by consumer trust to socially responsible company, foreign partners awareness of company activities motives, establishing trust relationships between enterprises, public administration, local governments and territorial communities, increasing investment attractiveness and staff loyalty.

As for the estimation of social result from stakeholders engagement, it can be argued that they are obviously correlated. Most scholars note the following types of social results: creation of prerequisites for sustainable development of society as a result of ecosystem conservation and

rational use of natural resources, development of the system of social protection of population, the provision of decent working and rest conditions, proper labor motivation and staff development, support for the social and creative activities of regional community.

The image-building and social results of the SEE indirectly lead to economic results, at least through the preferences received by socially responsible producers from loyal consumers and staff and partnership relations with the business community. In the studies of G. Bashnyanin, L. Goncharuk, three directions of social processes influence on the economic system are mentioned – purely social, economic and spiritual and intellectual, quantitative assessment of which are the subject of metrological analysis [10].

It should be noted that foreign experts do not give a clear-cut answer regarding the assessment of SEE impact on economic performance of enterprises. Having mentioned the existence of a rather weak positive correlation, the surveyed company executives claim that ensuring socio-economic engagement at enterprises is necessary and feasible as it is an important factor of impact on their long-term development [9]. So, for example in work [11] data on the positive influence of the social factor on the financial and economic indicators of the activities of socially responsible enterprises in comparison with other enterprises are shown on the results of long (10-15 years) observations.

The impact of image-building and social results on the financial and economic performance of enterprises can be considered indisputable, in the same way as the assertion that it is impossible to achieve social results in the absence of economic ones, as it was repeatedly emphasized in the works of B. Garilishin, L. Carroll, P. Drucker, F. Kotler and other scholars. Management of socioeconomic engagement requires the involvement of adequate tools at different stages of its implementation. In the form of a system, such tools have not been properly described in scientific sources, although in some publications of N. Kusyk, N. Yavorska, for example, methods of assessing the effectiveness of socially responsible enterprise activities (recursive, expert, econometric) and enterprise development (direct, indirect) are given.

If we present the process of management of socio-economic engagement as a series of sequential phases, then according to the sequence of their execution we can distinguish the following stages: conceptual, instrumental, organizational, substantiation of decisions, monitoring, analytical and corrective

The sequence of the process of managing socio-economic engagement at enterprises is schematically shown in Fig. 2.

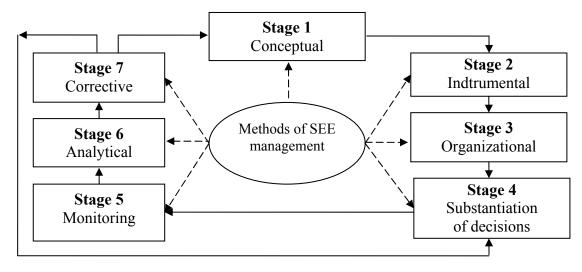


Fig. 2. Stages of the process of socio-economic engagement management* *Source: [2].

Outline of each stage of the process of SEE management and the types of tools that can be used for this purpose are shown in Table 1.

It should be noted that a wide variety of enterprise development tools described in works [3-7], mainly cover evaluation and development planning processes. At the same time, models for forecasting enterprises development, taking into account their interaction with surrounding, internal and external environment, have not received due consideration and substantiation, which calls for the filling of this gap. Despite the existence of developed forecasting methods based on models of time series or multiple regression [12-13], the task of constructing adequate models for predicting the results of stakeholders engagement is particularly topical from a practical point of view.

Conceptually, it can be argued that there is a correlation between the level of interaction of enterprises with the business environment and economic, social, and image-building results of their activities. It is also worth mentioning that there is without doubt a correlation between economic, social and image-building results. At the same time, we will assume that the present economic results, as well as the current stakeholders engagement, affect the future social and image-building results.

Table 1 Methods for socia and economic engagement management*

Stages of management process	Stages outline	Management methods
process 1	2	3
Stage 1. Conceptual	Setting goals, principles and tasks. Identifying factors of influence and defining criteria of effectiveness. Forming the concept of instrumental support. Synthesis of the system of indicators for assessing the state and dynamics of the SEE	 Analysis and synthesis of complex socio-economic systems; Simulation modelling; Social and economic forecasting; Scenario development; Others
Stage 2. Indtrumental	Developing tools for analyzing and evaluating SEE, visual presentation of computational results, tools for enterprises positioning in SEE space	 Financial and economic analysis; Analysis (assessment) of enterprise development; Expert methods; Others
Stage 3. Organizational	Developming normative and regulatory framework for the implementation and regulation of SEE	 Administrative methods; Authoritative, material and moral influence; Others
Stage 4. Substantiation of decisions	Establishing a static integral assessment of the interaction of enterprises, revealing the regularities of the change of CEE in time. Decision-making on the directions, types and intensity of SEE taking into account possible risks of its implementation.	 Analysis of dynamic rows; Correlation-regression analysis; Strategic analysis; Expert methods; Substantiation of decisions under conditions of uncertainty and conflict; Others

1	2	3
Stage 5. Monitoring	Providing enterprise management system with timely, reliable and complete information on the state and results of stakeholders engagement	Information, basic, problem, dynamic, competitive monitoringOthers
Stage 6. Analytical	Estimating image-building, social and economic results of engagement, as well as integral estimation of SEE	Expert methods;Evaluation of engagement results;Others
Stage 7. Corrective	Detecting the nature and size of deviations of current values from benchmarks, developing corrective actions on their basis	 Authoritative, material and moral influence; Administrative methods; Adjustment depending on deviation; Others

*Source: [2].

Based upon stated assumptions, we select the factors of influence on enterprises performance, establish indicators describing them, and construct regression models for forecasting socio-economic development of enterprises in the following sequence: social result, image-building result, economic result.

The regression model of social result is the following:

$$Z_{t}^{c} = \alpha_{0} + \alpha_{1} \cdot V_{t-1}^{BC} + \alpha_{2} \cdot V_{t-1}^{3C} + \alpha_{3} Z_{t-1}^{e}, \tag{1}$$

where α_0 , α_1 , α_2 , α_3 – model parameters; V_{t-1}^{BC} – evaluation of the interaction of the enterprise with the internal environment over the previous period of time; V_{t-1}^{3C} – evaluation of the interaction of the enterprise with the external environment; Z_{t-1}^e – growth of the economic result over the previous period of time.

We consider the growth of the economic result over the previous period, as well as the level of interaction of the enterprise and the internal and external environment to be influential factors that predetermine the emergence of social result. If the increase in staff remuneration, increase in the number of jobs, development of social infrastructure, etc. are chosen as indicators of social result, this approach can be considered to be justified.

In a similar way, we describe the relationship between image growth (dependent variable) and independent factor characteristics.

The regression model of the image-building result will look like this:

$$Z_{t}^{i} = \beta_{0} + \beta_{1} \cdot V_{t-1}^{HC} + \beta_{2} \cdot V_{t-1}^{3C} + \beta_{3} \cdot Z_{t-1}^{c} + \beta_{4} \cdot Z_{t-1}^{e}, \tag{2}$$

where β_0 , β_1 , β_2 , β_3 , β_4 – model parameters; V_{t-1}^{HC} – evaluation of the interaction of the enterprise

with the internal environment over the previous period of time; V_{t-1}^{3C} – evaluation of the interaction of the enterprise with the external environment; Z_{t-1}^e – growth of the economic result over the previous period of time; Z_{t-1}^c – assessment of the growth of social result.

Influence of social and economic results on the emergence of the image-building one is quite obvious. As for the assessment of the impact of the interaction, then the value Z_{t-1}^c ; Z_{t-1}^e ;

indirectly reflect the interaction of the enterprise with the internal and external environment, and the value V_{t-1}^{HC} – with the surrounding environment.

The dependence between the growth of economic result on the time interval t and the independent factor characteristics, which include the growth of image-building and social results over time t, economic result - over the previous period, as well as the assessment of the market conditions and business conditions are reflected in the following regression model:

$$Z_{t}^{e} = \gamma_{0} + \gamma_{1} \cdot d_{t}^{k} + \gamma_{2} \cdot d_{t}^{y} + \gamma_{3} \cdot Z_{t}^{i} + \gamma_{4} \cdot Z_{t}^{c} + \gamma_{5} \cdot Z_{t-1}^{e},$$
(3)

where γ_0 , γ_1 , γ_2 , γ_3 , γ_4 , γ_5 – model parameters; Z_{t-1}^e – growth of the economic result over the previous period of time; Z_t^i – assessment of image growth; Z_t^c – assessment of the growth of social result; d_t^k – assessment of market conditions; d_t^y – assessment of business conditions.

In aggregate, the structural equations (1) - (3) form a simultative econometric model of forecasting enterprise socio-economic development. Insufficiency or, in most cases, absence of certain information makes it difficult to construct a numerical econometric model of the form (1) - (3). Such an opportunity will become a reality with the approval of the concept of voluntary non-financial reports of enterprises and the formation of a system of non-financial indicators, which will allow us to use data on social and image-building results of enterprises.

At present, estimates of the growth of image-building, social and economic results and estimates of the interconnections of enterprises with the business environment can be obtained with the help of expert methods. It should be noted that when forming a group of experts in order to ensure the objectivity of assessments it is advisable to adhere to the principle of parity regarding the inclusion of external and internal experts.

Conclusions The scientific novelty of the research results is in formation of a coherent concept for managing the socio-economic stakeholders engagement in business environment, the theoretical significance is in substantiation of sequence and outline of the stages of SEE management process, and practical importance in construction of an econometric model for forecasting enterprises development taking into account the impact of their stakeholders engagement on final economic, social and image-building results.

The introduction of the concept of SEE management at enterprises, according to which, interests of each party of interaction are represented in managerial decision-making, will lead to the emergence of social and economic effect: at enterprises – as a result of establishing the image of socially responsible economic entity and attaining sustainable development; in the region – as a result of meeting the needs of local community and raising the living standard of the population; in the environment – due to the conservation and restoration of the ecosystem; in the business environment – as a result of the establishing of mutually beneficial partnership, responsible and ethical relations.

Directions for future scientific research are related to the formation of a system of indicators for assessing the state and dynamics of SEE, which are based on financial and non-financial reports of enterprises, as well as the development of methods for positioning enterprises in SEE.

Література

- 1. Kotler, P. Corporate Social Responsibility : Doing the Most Good for You Company and You Cause [Text] / Philip Kotler, Nancy Lee. John Wiley & Sons, 2011. 320 p.
- 2. Управління соціально-економічною взаємодією на підприємствах: методологія та інструментарій [Текст] : монографія / Р. В. Фещур [та ін.] ; за ред. Р. В. Фещура ; Національний університет «Львівська політехніка». Львів : Растр—7, 2016. 230 с.
- 3. Pogorelov, Y. S. The tools of maring and implementing for an enterprise derelopment strategy [Text] / Y. S. Pogorelov, K. A. Deeva // European Applied Science. −2013. − № 8. − P. 199–201.
- 4. Kaplan, R. S. The balanced scorecard: translation strategy into action [Text] / R. S. Kaplan, D. P. Norton Harvard Business School Press, 1996. 322 p.
- 5. Нили, Э. Призма эффективности: карта сбалансированных показателей для измерения успеха в бизнесе и управления [Текст] / Э. Нили, К. Адаме, М. Кеннерли Москва : Баланс–Клуб, 2003. 398 с.

- 6. Современные проблемы моделирования социально—экономических систем [Текст] : монография / под ред. В. С. Пономаренко, Т. С. Клебановой, Н. А. Кизима. Харьков : ИНЖЭК, 2009. 440 с.
- 7. Управління соціально-економічним розвитком підприємств: методологія та інструментарій [Текст] : монографія / Р. В. Фещур [та ін.] ; за ред. Р. В.Фещура ; Національний університет «Львівська політехніка». Львів : Растр-7, 2016. 226 с.
- 8. Центр «Розвиток корпоративної соціальної відповідальності» [Електронний ресурс]. Режим доступу: http://csr-ukraine.org.
- 9. Петрушенко, Ю. М. Міжнародні тенденції соціалізації діяльності підприємств [Текст] / Ю. М. Петрушенко, Т. І. Іванова, О. В. Дудкін // Механізм регулювання економіки. 2009. Т. 2, № 3. С. 268–275.
- 10. Башнянін, Г. І. Ефективність соціалізації економічних систем: методологічні проблеми метрологічного аналізу [Текст] / Г. І. Башнянін, Л. Я. Гончарук. Львів : Новий світ–2000, 2010. 240 с.
- 11. Райхельд, Ф. Ф. Эффект лояльности: движущие силы роста, прибыли и непреходящей ценности [Текст] / Ф. Ф. Райхельд, Т. Тил; пер. с англ. Москва: Вильямс, 2005. 384 с.
 - 12. Reza Hoshmand, A. Business forecasting: a practical approach [Text] / A. Reza Hoshmand. Routledge, 2010. 369 p.
 - 13. Айвазян, С. А. Методы эконометрики [Текст] / С. А. Айвазян. Москва : Магистр : ИНФРА-М, 2010. 512 с.

Стаття надійшла до редакції 30.07.2017

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References

- 1. Kotler, P., & Lee, N. (2011). Corporate Social Responsibility: Doing the Most Good for You Company and You Cause. John Wiley & Sons.
- 2. Feshchur, R. V., Yavorska, N. R., Yakymiv, A. I., Tymoshchuk, M. R., & Shyshkovskyi, T. V. (2016). *Upravlinnia sotsialno–ekonomichnoiu vzaiemodiieiu na pidpryiemstvakh: metodolohiia ta instrumentarii*. Lviv: Rastr–7.
- 3. Pogorelov, Y. S., & Deeva, K. A. (2013). The tools of maring and implementing for an enterprise derelopment strategy. *European Applied Science*, 8, 199–201.
- 4. Kaplan, R. S., & Norton, D.P. (1996). The balanced scorecard: translation strategy into action. Harvard Business School Press
- 5. Nili, E., Adame, K., & Kennerli, M. (2003). Prizma jeffektivnosti: karta sbalansirovannykh pokazatelei dlia izmereniia uspekha v biznese i upravleniia. Moskva: Balans–Klub.
- 6. Ponomarenko, V. S., Klebanova, T. S., & Kizim, N. A. (2009). Sovremennye problemy modelirovaniia sotsialno–ekonomicheskikh Kharkov: INZHEK.
- 7. Feshchur, R. V., Shyshkovskyi, S. V., Yakymiv, A. I., Lebid, T. V., Tymoshchuk, M. R., & Yavorska, N. R. (2016). *Upravlinnia sotsialno–ekonomichnym rozvytkom pidpryiemstv: metodolohiia ta instrumentarii*. Lviv: Rastr–7.
 - 8. Tsentr «Rozvytok korporatyvnoi sotsialnoi vidpovidalnosti». Available at: http://csr-ukraine.org
- 9. Petrushenko, Yu. M., Ivanova, T. I., & Dudkin, O. V. (2009). Mizhnarodni tendentsii sotsializatsii diialnosti pidpryiemstv. *Mekhanizm rehuliuvannia ekonomiky*, 3, 268–275.
- 10. Bashnianin, H. I., & Honcharuk, L. Ya. (2010). Efektyvnist sotsializatsii ekonomichnykh system: metodolohichni problemy metrolohichnoho analizu. Lviv: Novyi svit–2000.
- 11. Raikheld, F. F., & Til, T. (2005). Effekt loialnosti: dvizhushchie sily rosta, pribyli i neprekhodiashchei tsennosti. Moskva: Viliams.
 - 12. Reza Hoshmand, A. (2010). Business forecasting: a practical approach. Routledge.
 - 13. Aivazian, S. A. (2010). Metody ekonometriki. Moskva: Magistr: INFRA-M.

Received 30.07.2017

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