

максимізація доходів та збільшення частки у ВВП; мультиплікативний ефект від функціонування відповідного сектора економіки; посилення економічної безпеки держави; мінімізація транзакційних витрат майбутніх періодів; гармонізація інтересів суспільства (соціальна, економічна, екологічна компоненти).

Література

1. Colin Clark. The conditions of economic progress. Front Cover. Colin Clark. Macmillan and co., limited, 1940. – Business & Economics. – 504 p.
2. Седлак М. Тенденции развития секторальной структуры экономики / М. Седлак // Проблемы теории и практики управления : Междунар. журнал. – 1998. – № 4/98. [Электронный ресурс]. – Доступный с https://vasilieva.narod.ru/4_4_98.htm.
3. Коропецький І.С. Економічні праці : зб. наук. статей / І.С. Коропецький. – К. : Вид-во "Смолооскип", 1998. – 416 с.
4. Коропецький І.С. Про Україну, економіку і про себе / І.С. Коропецький. – К. : Вид-во "Дніпро", 2003. – 490 с.
5. Горкіна Л. Літописець і теоретик економіки України. З нагоди 90-річчя іноземного члена НАН України І.С. Коропецького / Л. Горкіна, М. Довбенко // Вісник НАН України : зб. наук. праць. – 2011. – № 8. – С. 44-47.
6. Шукан М.В. К определению транзакционных издержек / М.В. Шукан. [Электронный ресурс]. – Доступный с <https://edoc.bseu.by>.
7. Demsetz, H. Cost of Transaction / H. Demsetz // Quarterly Journal of Economics. – 1968. – Vol. 81, № 1. – Pp. 34-45.
8. Коропецький І.С. Сектор транзакцій в сучасній Україні // Економіка України. – 1997. – № 7. – С. 43-51.
9. Єрохін С.А. Політика модернізації і механізми зміни секторальної структури економіки / С.А. Єрохін // Економічний простір : зб. наук. праць. – 2014. – № 87. – С. 50-60.
10. Бажал Ю. Доля теорії: 100-річчя класичної праці М.І. Туган-Барановського і сучасність / Ю. Бажал // Економіка України : політико-економічний журнал. – 2004. – № 12. – С. 58-63.
11. Пріоритети національного економічного розвитку в контексті глобалізаційних викликів : монографія. – У 2-ох ч. – Ч. 1 / за ред. В.М. Гейця, А.А. Мазараки. – К. : Вид-во КНТЕУ, 2008. – 389 с.
12. Глазьев С. Возможности и ограничения технико-экономического развития России в условиях структурных изменений в мировой экономике / С. Глазьев. [Электронный ресурс]. – Доступный с <https://spkurdyumov.narod.ru/glaziev.htm>.
13. Ігнатюк А.І. Теоретико-методологічні підходи до визначення пріоритетних галузей економіки / А.І. Ігнатюк. [Електронний ресурс]. – Доступний з https://www.nbuv.gov.ua/old_jm/Soc_Gum/Ekpr/2010_33/Zmist/6PDF.pdf.
14. Porter M.E. The Competitive Advantage of Nations / M.E. Porter. – New York : Free Press, 1990. – 234 p.
15. Grant R.M. Porter's Competitive Advantage of Nations: An Assessment / R.M. Grant // Strategic Management Journal. – 1991. – Vol. 12. – Pp. 535-48.
16. Гіл, Чарлз В.Л. Міжнародний бізнес: конкуренція на глобальному ринку : пер. з англ. А. Олійник, Р. Ткачук / Гіл, В.Л. Чарлз. – К. : Вид-во Соломії Павличко "Основи", 2001. – 856 с.
17. Осипов Ю. Надвигающаяся технологическая революция и экономический социум / Ю. Осипов // Экономические науки : сб. науч. тр. – 1988. – № 2. – С. 3-14.
18. Економіка міст України. Експертна оцінка GfK Ukraine, Липень, 2015. [Електронний ресурс]. – Доступний з <https://www.gfk.com>.

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Pynda Yu.V. Теоретические основания отраслевых детерминант структуры национальной экономики

Очерчено еволюційне розвиток економічних систем різних країн. Проаналізовані підходи учених відносно визначення домінуючих галузей економіки та секторів економіки. Встановлено тенденції, які мали місце в довгостроковій динаміці розвитку національно-хозяйственных секторів. Визначено передумови розвитку галузей-локомотивів загального розвитку. Виділено ключові фактори, які стали передумовою структурних змін у секторах економіки. Розкрито ризики в сек-

торах економіки і їх стійкість до змін зовнішніх ринків. Обґрунтовано особливості формування і розвитку домінуючих галузей і секторів національної економіки. Вивчено ключові критерії відносно визначення рівня пріоритетності секторів національної економіки.

Ключевые слова: домінуючі галузі, сектори економіки, циклічні коливання, розвиток, кількість зайнятих, економіка.

Pynda Yu.V. Theoretical Grounds of Sectorial Determinants of Structure of National Economy

Evolutional development of the economic systems of different countries is outlined. Approaches of researchers are analysed in relation to determination of dominant industries and sectors of economy. Tendencies which took place in the long-term dynamics of development of national economic sectors are set. Pre-conditions for the formation of industries-locomotives of general development are defined. Key factors which became pre-conditions of structural changes in the sectors of economy are selected. Risks in the sectors of economy and their firmness are exposed to the changes of oversea markets. The features of forming and development of dominant industries and sectors of national economy are grounded. The key criteria in relation to determination of level of priority of sectors of national economy are certified.

Keywords: dominant industries, sectors of economy, cyclic vibrations, development, amount of busy, economy.

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FEATURES OF MARK-FACTOR METHOD OF EVALUATION THE POSITIONS OF WORKERS OF ENTERPRISES

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The essence of the notion and the example of the practical use of mark-factor method of evaluation the positions of workers of enterprises are considered in the article. With the purpose of increase of effectiveness of motivation of innovative activity on an enterprise (stimulation employees of the enterprise to reach the goals of the organization) his features are certain: evaluation exactness, complexity of calculations, considerable requirements to the informative providing, high charges and others like that.

Keywords: reason, bonuses, evaluations of positions of workers, mark-factor method, features.

Problem. Motivational activities of the company are aimed to encourage its employees and managers to meet their own needs and the objectives of the enterprise. It involves the usage of effective incentives, which include bonuses, additional charges, raises, involving to management, etc. Let us consider the payment of bonuses in details.

Bonuses as the part of additional salaries of workers are productive impetus to make their contribution to the achievement of the outcomes of the company. They are paid in case of increasing staff productivity at the end of the target period, etc [1]. By using bonuses it is also possible to stimulate innovative activity of employees, considering results during the payment of employees' bonuses. Thus there is a need to evaluate the activity of employee on the appropriate post and its connection with the

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results of the innovative activity enterprise. For that we can apply a variety of evaluation methods of staff's posts: mark-factor method, the ranking method, the Hay evaluation method, classification of posts, method of 360-degree feedback, etc. However, mark-factor method is considered to be the most commonly used among all of them and should be investigated thoroughly.

Materials and methods. The use of mark-factor evaluation method of employees' positions thoroughly studied and described in the works of Kuzmin O.E., Vet-luzhskiyh E., Milkovycha D., Newman D., Povarycha I.P., Babin S.A., Babin S.I., Goncharenko A. and others.

Researchers [1-8] described in detail the scope of usage of mark-factor method and the methodology of its usage in determining the basic salary in enterprises with different economic activities (trading companies, banks, etc.). Also scientific works [3-6] include comparison of mark-factor method of evaluation the positions with other methods (the ranking method, the Hay evaluation method, classification of posts, and method of 360-degree feedback) and indicate its advantages over other methods. They are revealed in providing analysis and evaluation of the accuracy of the obtained results.

Thus, researchers do not reveal the whole specifics of evaluation the positions of workers by mark-factor method and the possibility of its use in promoting certain aspects of the company (e.g. its innovative development), not only during the formation of basic salary.

Purpose. According to a chosen question in the article should be provided examples of evaluation the positions of workers using mark-factor method and to determine its features in order to enhance the effectiveness of motivational activities in the enterprise, stimulate innovative activities of its employees.

Results. Usage of mark-factor method of evaluation the positions of workers was carried at PrJSC "Konveer" in such order:

- defining the goals and objectives of the evaluation;
- information assurance of the evaluation process;
- the establishment of indicators (factors) which are used during the evaluation;
- formation of mark-factor evaluation scale and its verification;
- evaluating positions using mark-factor method according to the developed scale;
- determination of the level of the received results and making appropriate management decisions.

The purpose of the mark-factor method of evaluation the positions of workers is the development of their bonuses according to the results of the innovative activity of the enterprise, which involves the calculation of the grades (levels) positions of workers. For this purpose was formed an expert group which after conducting the calculations consisted of 10 people – managers and external consultants. The expert group provided information which took place on the stage of information provision about the personal qualities of workers, their roles and responsibilities, experience and the results of innovative, industrial and economic activities of the enterprise.

The next step was the establishment of evaluation indicators (evaluation factors) and the formation of mark-factor scale. For this purpose were involved such members of the expert group as managers (works manager, personnel manager, production ma-

nager, etc.) and external consultants. The expert investigation was held among the list of all factors that determine the results of the innovative activities of the employee. The objectives of the expert investigation were the determination of the most important factors, evaluation of the significance of their impact on the target indicator, formation of a mark-factor scale which should be used during the evaluation of positions to determine their grades (formation of bonuses system is based on them).

As a result of discussion the experts investigated the influencing factors on the innovative activity of the workers that allowed them to establish indicators of evaluation. Experts selected the following five complementary indicators (factors of evaluation): the level of education and innovative activity experience; financial responsibility for the results of innovative activities; the level of authority and responsibility for the process and results of innovation activity; the number of subordinates engaged in innovation activity; the complexity and novelty of the tasks related to innovative activity. The number of indicators is typically ranging from 3 to 21. In this case, the selected five indicators should not complicate the evaluation process.

After selecting indicators, they were evaluated by levels for subsequent inclusion into the mark-factor table. Each indicator of PrJSC "Konveer" had five levels of evaluation (possible value of the factors) that are listed in the Table. 1.

Table 1. Evaluation indicators (factors) of the impact on innovation of employees of PrJSC "Konveer" and their levels [1-8]

Evaluation indicators	Level	Description of the factor
1	2	3
The education level and experience of the innovative activity	1	Professional knowledge of a worker in a narrow field, the possibility to perform simple operations related to innovative activity. The employee has no previous experience of performing innovation activities
	2	Basic theoretical knowledge, vocational training to perform operations related to moderate innovative activities. An employee has no previous experience of performing innovation activities
	3	Worker's knowledge in several areas, work experience in order to perform difficult tasks related to innovative activities
	4	Deep professional knowledge and specialized training in the field of innovative activities, experience of performing innovative activities
	5	Worker's expertise, their application in practice, experience of performing of innovative activities
Financial responsibility for the results of innovative activities	1	As a result of doing a narrow range of duties and monotonous work an employee's almost have no financial responsibility for its results.
	2	An employee performs a limited range of operations related to moderate innovation activities, the financial liability is limited to the cost of used inputs
	3	There is a significant responsibility associated with the fact that the employee performs a significant part of innovative transactions, monitors its performance by other employees
	4	High financial responsibility indicates that an employee is involved in the development and implementation of innovative activities in the enterprise

	5	Employees have financial responsibility for the results of innovative activities because they are in charge of the development of innovative inventions, and for the implementation of innovative activities in the enterprise
The level of authority and responsibility for the process and results of Innovative activities	1	The level of authority and responsibility is limited because an employee performs a narrow range of low complexity operations associated with innovative activities and does not make any decision on the implementation of innovative processes in the enterprise
	2	An employee has narrow and limited authority and responsibility for the results of innovative activities, since he does not participate in the development of innovations and does only a narrow range of assigned operations of medium complexity.
	3	An employee has an authority to control employees who are engaged in innovative activity in the enterprise. That is why there is a significant responsibility for the process and results of innovative activities.
	4	An employee has high level of responsibilities, high responsibility for the implementation and results of innovative activities, because he is involved in developing a program of innovative activities
	5	The highest level of responsibility and authority lies in the fact that the employee takes the main part in the development and in the control of the whole process of innovative activities
The complexity and novelty of the tasks associated with innovative activity	1	Minor, workers perform simple operations
	2	Minor, because the employee is involved in the innovative process only as a performer operations of moderate complexity
	3	Moderate, a worker explains how to perform the operation to lower-level employees
	4	High level of complexity and novelty of solved issues related to innovative activities because an employee makes a decision during the development and implementation of innovations in the enterprise
	5	The highest level of complexity and novelty of tasks because an employee develops a program of innovative activity, makes management decisions
Number of subordinates involved in innovative activities	1	An employee has no subordinates, performs activities related to the implementation of innovations
	2	An employee must subordinate the workers engaged in the production of innovative products
	3	An employee is a shop superintendent (department) whose employees perform activities related to the implementation of innovations
	4	A worker is a high-level manager, supervisor of certain functions of the enterprise (deputy director of economic affairs, chief engineer)
	5	A worker is a high-level manager; department heads and employees of various functional direction are under his direction.

Taking into the consideration the evaluation indicators (factors) of the impact on innovative activities of a worker, who is on the relevant position, these indicators have different levels, which form an assessment of this position, should determine their validity. Based on the general rules of the formation of the weight of influence factors on the resulting index (the sum of the weight of all the factors must be equal to one) were formed weight distributions of evaluating indicators of the impact on innovative activities of the workers of PrJSC "Konveer" (Table 2).

Table 2. The distribution of weighting factors that influence on innovative activity of PrJSC "Konveer" [2]

Factors	Weight, %
The level of education and experience of innovative activities	15
Financial responsibility for the results of innovative activities	20
The level of authority and responsibility for the process and results of innovative activities	20
Number of subordinates engaged in innovation activities	15
The complexity and novelty of the tasks associated with innovative activity	30

According to the results of formation of evaluation levels of impact indicators on innovative activities of employees and the weight distribution of impact factors, was formed mark-factor scale of evaluation the positions of workers of of PrJSC "Konveer" that is listed in the Table. 3.

Table 3. Mark-factor method of evaluation the positions of workers of PrJSC "Konveer" [2]

№	Factor	Weight of the factor, %	Levels				
			1	2	3	4	5
1	The level of education and experience of innovative activities	15	0,15	0,3	0,45	0,6	0,75
2	Financial responsibility for the results of innovative activities	20	0,2	0,4	0,6	0,8	1
3	The level of authority and responsibility for the process and results of innovative activities	20	0,2	0,4	0,6	0,8	1
4	Number of subordinates engaged in innovation activities	15	0,15	0,3	0,45	0,6	0,75
5	The complexity and novelty of the tasks associated with innovative activity	30	0,3	0,6	0,9	1,2	1,5
	Sum	100 %	–	–	–	–	–

Mark-factor scale of evaluation the positions of workers (Table 3) contains estimates that suppose to be assigned to certain positions in accordance with the received indicator's level (Table 1) and the significance of its impact on innovative activities of the enterprise (Table 2).

There are possible different options of evaluation using these two parameters (level factor and its importance) but in the practice of business management is used their product. It allows simplifying the calculations during establishing grades (the value of 10 % interval of estimates for the levels using the weight of the first-level factor is used in the practice of business management).

In order to check the coverage factor of mark-factor scale of innovative activity, the company has formed a representative selection of employees to evaluate their positions. According to the calculation, the selection was 10 % of employees of PrJSC "Konveer". Test results prove the adequacy of the previously defined indicators of evaluation impact of the worker's position on innovative activity.

Evaluation of positions using mark-factor method, and determination of the positions level was carried out by a group of experts applying mark-factor table of the output of an integrated assessment of the summation. It is significant that the expert

group should evaluate positions, not employees, who hold it. In this case, the size of bonuses of innovative activities will be established for the position and not to a specific employee. The results of the evaluation of the employees' positions of PrJSC "Konveer" are given in Table 4. Obtained levels positions are used for making management decisions: defining the boundaries of grades positions and assign them to the appropriate size of bonuses.

As a result of the calculations it can be stated that mark-factor method of evaluation the positions of workers can consider accurate due to the use of expert techniques and a number of mathematical calculations. The results of its application are characterized by a lower level of subjectivity in comparison with alternative methods of assessment. However, due to the implementation of the above steps data ware, formation indicators (factors) evaluation, and development mark-factor grading scale, etc., this method should be attributed to labor-intensive.

Considering the fact that employees of the company are evaluated by using mark-factor method, it is necessary to pay particular attention to compliance with the information requirements, which must be complete and accurate, at the stage of information provision process of the following sequence. At the same time it suggests significant requirements for information support of the evaluation process and forms expensiveness of mark-factor method of evaluation the positions of workers of enterprises.

Table 4. The results of determination of level of employees' positions of PrJSC "Konveer" during the formation of workers bonuses based on the results of innovative activities

Positions	Level indicators / scores					The total level of positions Σ
	The level of education and experience of innovative activities	Financial responsibility for the results of innovative activities	The level of authority and responsibility for the process and results of innovative activities	Number of sub-ordinates engaged in innovation activities	The complexity and novelty of the tasks associated with innovative activity	
Manager	5/0,75	4/0,8	5/1,0	4/0,60	5/1,5	4,65
1-st Deputy manager	5/0,75	4/0,8	5/1,0	4/0,60	4/1,2	4,35
Deputy manager of foreign-economic activity	5/0,75	4/0,8	5/1,0	4/0,60	4/1,2	4,35
Chief engineer	5/0,75	4/0,8	5/1,0	5/0,75	5/1,5	4,80
Chief of repair-energy department	5/0,75	3/0,6	4/0,8	4/0,60	5/1,5	4,25
Worker of repair-energy department	5/0,75	2/0,4	4/0,8	3/0,45	4/1,2	3,60
Manager of labor protection department	4/0,60	2/0,4	2/0,4	1/0,15	1/0,3	1,85

Conclusions. Mark-factor method involves evaluation of the employees' positions (in scores) based on a certain level characteristics (factors) with regard to their weight. Usage of this method at PrJSC "Konveer" was carried out with the purpose of development of innovative activities through its stimulation among employees: determining the goals and objectives of the research, information assurance, installation of

evaluation indicators (factors), the formation of mark- factor assessment scale and its testing, valuating jobs using this method according to the scale, making appropriate management decisions.

It made possible to identify the following features of mark-factor method: accuracy assessment as a result of mathematical calculations and the use of peer reviews; complexity of calculations that are composed of a number of stages, significant requirements for the information assurance of the evaluation process, the high cost on the implementation and others.

References

1. Kuzmin O. 2007. Fundamentals of Management / O. Kuzmin, O. Melnyk. – Kyiv, Akademydav. – 464 p.
2. Elena Vetluzhskikh. Balanced scorecard, approach of the systems and KPI: Instruments of for leaders / of Elena Vetluzhskikh. – Alpina Business Books, 2008. – 204 p.
3. Milkovych, George T. System of rewards and methods of stimulation of personnel / George T. Milkovych, Jerry M. Newmann; truded. with the eng [of L.I. Matgrass of and other. – M. : Vershyna, 2005. – 760 p., Chapters: 3-8.
4. Henderson, Compensative management. 8th publ. / Trudged. with an eng. Under ред. Gorelova N.I. / Henderson. – St.P: Piter, 2004. – 880 p., Chapters: 6-11.
5. Novikov M. Indemnification and privilege / C. Novikov // Guide – book on a skilled management. – 2005. – prod. 3.
6. Povarych I.P. Development and realization of compensative policy of organization / I.P. Povarych, S.A. Babyn, S.I. Babyna. – M. : the Publishing house "Academy of natural Science", 2011. – 280 p.
7. Goncharenko A.G. The Grade scale / A.G. Goncharenko // Business. on December, 5, 2005. – № 49 (672). – Pp. 55-56.
8. Zelenova O.I. Motivation of personnel in multinational organization: the Train aid / O.I. Zelenova, N.V. Sewastjanova. – M. : RYDN, 2008. – 235 p.

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Дорошкевич К.О., Вороновська М.М., Салата І.З., Маслак Т.О. Особливості бально-факторного методу оцінювання посад працівників підприємств

Досліджено сутність та розглянуто приклад практичного використання бально-факторного методу оцінювання посад працівників підприємств. З метою підвищення результативності мотивування інноваційної діяльності на підприємстві (стимулювання працівників підприємства для досягнення цілей організації) визначено його особливості: точність оцінювання, трудомісткість розрахунків, високі вимоги до інформаційного забезпечення, значні витрати тощо.

Ключові слова: мотивування, премії, оцінювання посад працівників, бально-факторний метод, особливості.

Дорошкевич К.О., Вороновская М.М., Салата И.З., Маслак Т.А. Особенности бально-факторного метода оценки должностей работников предприятий

Исследована сущность и рассмотрен пример практического использования бально-факторного метода оценки должностей работников предприятий. С целью повышения результативности мотивации инновационной деятельности на предприятии (стимулирование работников предприятия для достижения целей организации) определены его особенности: точность оценки, трудоемкость расчетов, высокие требования к информационному обеспечению, значительные расходы и тому подобное.

Ключевые слова: мотивация, премии, оценка должностей работников, бально-факторный метод, особенности.