

“Model of management of the employees’ innovative behavior at the industrial enterprises”

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MODEL OF MANAGEMENT OF THE EMPLOYEES' INNOVATIVE BEHAVIOR AT THE INDUSTRIAL ENTERPRISES

Abstract

Employee's innovative behavior is an impulse that initiates a range of organizational processes, owing to which the enterprise forms its competitive advantage. In the article, the determinative factors of influence on the innovative behavior in the context of separate age groups were defined. According to the results of multifactor regression analysis, the determinative types of trust include institutional, horizontal and vertical, stress resistance to innovations, managerial support and innovative work environment. It was proved that the employee's age does not affect the innovative activity of industrial enterprises. When forming the main components of the management model of innovative behavior, the focus is on personal and professional characteristics of managers, which help to form the innovative type of behavior of the employees; a system for stimulating the real results of such behavior; ways of promotion of new developments via the innovation platforms and creation of the special structural unit with the aim to implement the proposed measures.

Keywords

innovative type of behavior, institutional trust,
horizontal trust, vertical trust, innovative work
environment, stress resistance, managerial support

JEL Classification L60, M12, O31

INTRODUCTION

Transition of Ukraine to market economy has set a range of fundamentally new tasks, the main of which is to maximally and effectively use the innovations, in particular, at the industrial enterprises. The success of innovative activity depends on the extent to which the direct participants – personnel involved in the innovative process – are interested in the quick and economically effective implementation of the results of the scientific developments into the production. Not only the methods and forms of stimulating their labor by the enterprise play a decisive role here, but also the ability of management to increase the activity of the personnel in the search of new knowledge, new ideas, non-standard solutions and support the atmosphere of creativity. The improvement of innovativeness due to organizational actions is a relevant and important topic, which requires formation of innovative approaches in the managerial activity of the enterprise.

In both the developed countries and Ukraine, general tendencies are observed, which are manifested in the decreased birth rate, reproductive activity of the population, its further "ageing" and maintaining such situation in the long run. The existing population dynamics exacerbates a range of demographic, economic and political problems. It, in the first place, concerns the deterioration of age and sex structure of the population, reproductive regime, provision of the national econo-

my with the labor resources of the corresponding quality, planning of the qualified personnel training, etc. The process of ageing is an increase of the specific weight of persons older than 65 years, if it exceeds 10%, the nation belongs to the ageing one. Today, in Ukraine, more than 20% of the population are aged 65 years and older.

Employees' innovative behavior is an impulse that initiates a range of processes, owing to which the enterprise forms its competitive advantage. That's why in order to create the system of effective management of employees' innovative behavior, the factors of influence on it in different age groups should be defined and stimulate them via the corresponding organizational actions of the special structural unit, where the impetus of the implementation of measures are the professional managers, resultant management system, innovation platforms of informing and sale of new products.

1. LITERATURE REVIEW

Employees' individual innovation behavior is an extremely important asset, which enables to actively function in the business environment (Cingöz & Akdogan, 2011). It can be interpreted as an individual involvement in the activity, which supports or prevents the creation of new value added, i.e. is positive or negative reaction to innovative initiatives (De Jong & Hartog, 2007; Yuan & Woodman, 2010) or as an initiative type of individual or collective behavior, connected with the systematic mastering of new ways of activity by social actors in the different spheres of social life or creation of new objects of material and spiritual cultures (Kobiak, 2012). The scientists define many different factors, which define the employees' innovativeness. In particular, these are organizational culture, which leads to creativity, participation, creation of an organization structure, which is devoid of bureaucracy, managerial support, which is accompanied by the effective system of motivation, readiness for open communication employee-manager and assessment of the individual characteristics of everyone (Scott & Bruce, 1994; Cingöz & Akdogan, 2011; Jafri, 2010). Apart from the definition "organizational culture", the scientists and publicists use the notions "corporate culture", "culture of organization". All they have common informational load, thus, this group of the given definitions can be considered a synonymic row (Kapitonov, 2005). Other group of scientists points to the style of collective work, knowledge exchange, individual and collective training systems (Hu, Horng, Sun, 2009), effectiveness of individual creativity (Hsu, Hou, Fan, 2011), need in cognition (Wu, Parker, & De Jong, 2013), self-management (Carmeli, Meitar, & Weisberg,

2006), participatory management and sociability (De Jong & Woolthuis, 2008, Yesil & Sozbilir, 2013). Taking part in decision making, practice of empowerment, delegation of powers enable the employees to obtain the necessary autonomy for creating new ideas and implementing the innovations (Cingöz & Akdogan, 2011). According to the research data, individual innovative behavior also depends on the quality of collaboration employee-manager, which is characterized by level of trust and respect between them (Scott & Bruce, 1994).

The importance of trust grows in risky situations, to which undoubtedly belongs the innovative activity (Loon Hoe, 2007). The innovations require collective training, knowledge exchange and long-term relationships. Innovative processes are based on trust to common intentions and competences (De Jong & Woolthuis, 2008). Long-term trust eliminates the need to assess the reliability of partner relationship in the responsible moments of collaboration, which makes the decision-making process easier (Lipych, 2017). Of course, innovations can also become the additional burden and will contribute to the increase of requirements and work restrictions, which, in turn, can intensify the stress because of excessive expectations (for example, from the manager) and affect the risk of burnout.

In spite of the fundamental scientific works of the abovementioned scientists, the issues of formation and implementation of the management model, which would orient towards activation of the innovative behavior of employees at the industrial enterprises, still remain insufficiently studied. The abovementioned makes the topic of the research relevant.

2. AIMS

The aim of the article is to form the management model of innovative behavior by: defining the factors of influence on individual innovative behavior of the employees at the industrial enterprises; identifying the differences in their significance for employees of separate age groups; performing an analysis of personal and professional characteristics of managers, defining the ones among them who help to form the innovative type of behavior among the subordinates; creating the corresponding structural unit, the system of innovative behavior stimulation and innovation platform for knowledge exchange, informing and sale of new products.

3. RESULTS

The era of demographic changes witnesses the growth of interest to the influence of age on job satisfaction, innovative processes, teamwork, decision-making processes and work effectiveness. It is stated in the report of World Health Organization that the mental work productivity decreases with age, particularly in situations that are connected with high requirements to sensory perception, operation memory and speed of information processing. Still, when performing the tasks, which require concentration and experience, older employees have the same productivity as the young ones (WHO, 1993).

One of the key issues is the influence of age on innovative activity, including the influence on the level of making new technological solutions (Morris, Venkatesh, & Ackerman, 2005). Although many researches prove that there is a high level of anxiety and discomfort, connected with new technologies faced by the old-age employees (Turner, Turner, & Van De Walle, 2007), they also show their readiness to master IT technologies (Rizzuto, 2011). The results of the survey show that the attitude towards IT and technological changes is not a personal characteristic in the context of age, but a synergetic interaction of multilevel and multi-factor organizational effects, which can be used for increasing the effective support of old-age employees. When implementing the technological changes, they can create their advantages in the

corresponding work environment (Rizzuto, 2011). The researches on the place of employees in organizational processes did not analyze the interrelationships, behavior and skills of old-age employees compared to young ones, but, as a rule, studied the working conditions of groups, which consisted of the people of different age, assuming that their average age will increase. It was found that the groups of the above average age are characterized with big amount of satisfied and committed to the enterprise. They obtain more benefit during the learning process and bring more benefit in the decision making. It happens because of skills and experience, intellectual and social capital (Peterson & Spiker, 2005), knowledge about organization and its culture (Gellert & Kuipers, 2008), accumulated during many years.

It should be noted that there are also cultural differences in age perception. In the Asian countries (China, Japan, Korea), age is a synonym of wisdom, experience and respect. That's why it is not an obstacle for achieving the aims in the entrepreneurship. Adaptability, sensitivity, individual skills are personal variables, which do not depend on age increase, vice versa, these characteristics can improve with age (Patrickson & Hartmann, 1995).

So, some researches show that older employees are less innovative than the young ones. On the other hand, they show that the level of innovativeness depends on the set of environmental factors, which encourages to eliminating the barriers, risk, irrespective of the employee's age. In order to check how correct are the statements about decreased competence, flexibility, education or motivation with age, the innovative behavior of different age groups of employees was analyzed.

In order to define the factors of influence on individual innovative behavior of different age groups of the employees, the survey of employees of the industrial enterprises in Western regions of Ukraine was made.

The necessary amount of respondents was calculated by the following formula (Kigel, 2003):

$$k = \frac{\rho(1-\rho)}{\varepsilon_p^2} \cdot t_S^2, \quad (1)$$

where k – number of respondents, ρ – share of respondents, characterized by the features, which were defined when organizing the expert survey, t_s – student criterion with the chosen level of significance (trust interval), ε_ρ^2 – mean limiting error.

During the organization of the expert survey 5,880 employees of industrial enterprises were chosen from the number of enterprises-members of Association of Technologists and Machine -building specialists of Ukraine. Primary treatment of the applicants to the role of experts showed that 345 of them comply with the established criteria (the representatives of the institutional and functional levels of management, which take a direct part in innovative processes and have an experience in solving the engineering and technological problems could be the experts). Among the managers of the functional level, the officials who are responsible for organization and monitoring of innovative provision for enterprise’s technological upgrade (heads of financial department), as well as persons who are responsible for technological processes at the enterprise, their modernization, etc. (engineering technologist, design engineer, head of the experimental department or scientific-research, testing laboratory, mechanical engineer, energy engineer, cost engineer and others) were the respondents. With help of the formula given above, it was found that the number of experts at the given level of probability 0.95 and mean limiting error 0.15 is 345 persons.

In order to achieve the established aim, the respondents’ survey was performed during the period 2015–2017. Their demographic structure is

presented in Table 1.

The formed expert group was offered to identify and assess the factors of influence on employees’ innovative behavior. Generalized experts’ points of view enabled to define six factors, which were found to be common in the list of factors, defined by the experts.

Let us consider the identified factors in terms of their nature. Trust is the assurance in the reliability of the social object, which is based on the perception or knowledge about it, connected with the ability to anticipate, forecast or affect the actions of this object, control its activity. Trust affects the innovative actions, supports the creativity. It is an important element of collaboration, as it reveals and supports it, encourages the information exchange, enriches the relations, enhances the mutual openness, contributes to resolution of conflicts; enables to manage the hidden knowledge, which are impossible to be tested with the help of formal means because of their uniqueness and low level of codification. Institutional trust 14. Horizontal trust is based on trust towards co-workers, vertical one is the assurance that the direct manager makes the decisions that take into account needs of the subordinates, on the one hand, and increase the effectiveness of the enterprise’s activity, on the other hand.

Innovative work environment is interpreted as a corporate culture, which is relies on innovations, provides the resources and ability to pass the ideas to the enterprise by commercializing them, encourages to take a risk, to create and exchange the knowledge, is characterized by the autonomy and

Table 1. Demographic structure of the respondents

Source: Calculated by the authors.

Characteristic	Number	Percent	Characteristic	Number	Percent
Sex			Education		
Women	134	38.9	Nine-year	0	0
Men	211	61.1	Vocational	75	21.8
Age			Secondary	16	4.52
Below 25 years	19	5.4	Secondary special	6	1.8
25-35 years	82	24.7	Higher	248	71.88
36-45 years	130	37.8	Type of employment		
46-55 years	86	25.0	Full-time	220	63.9
Above 56 years	28	39.7	Contract/internship	103/12	29.9/3.6
			Temporary employee	10	2.2

Table 2. Analysis of scales' reliability. Mean and standard deviation

Source: Calculated by the authors.

Indicators of innovation activity	Mean deviation	Standard deviation	Cronbach's alpha coefficient
Innovative work environment	65.71	10.8	0.93
Managerial support	29.47	5.55	0.91
Stress resistance	36.19	6.53	0.87
Institutional trust	52.55	9.13	0.88
Horizontal trust	95.87	13.25	0.94
Vertical trust	55.82	9.68	0.95

atmosphere of collaboration. Managerial support means the help in implementing the ideas, friendly management and mentorship.

Stress resistance is identified by a set of personal qualities that enable to survive in risky and crisis situation without unpleasant consequences for personal activity of an individual and work environment.

As the statistical analysis shows, the most reasonable method for researching the statistical links based on long-term data is the multifactor regression analysis, the simplified model of which is described as follows:

$$R = a_0 + a_1 \cdot X_1 + a_2 \cdot X_2 + \dots + a_i \cdot X_i + \dots + a_m \cdot X_m. \quad (2)$$

Let us consider the innovative behavior of different age groups of employees $J = 6$ ($j = 1..3$) as an effective characteristic; $a_0 \dots a_i \dots a_m$ – the parameters of regression equation, which will be defined by the regression analysis method; $X_1 \dots X_m$ – factorials of regression equation.

Let us assume that $X_{1,j}$ – innovative work environment in j -th age group of employees; $X_{2,j}$ – managerial support in j -th age group of employees; X_3 – stress resistance in j -th age group of employees; X_4 – institutional trust in j -th age group

of employees; X_5 – horizontal trust in j -th age group of employees; X_6 – vertical trust in j -th age group of employees. In order to form the data $X_1 - X_6$, regression analysis was preliminarily performed in a partial form, after that, the data were summarized in the mathematical model.

When analyzing the factors of influence on employees' innovative behavior, first of all, let us define the reliability of measurement scales. Every analyzed construct is characterized by high reliability, as Cronbach's alpha coefficient, which shows internal consistency of characteristics, reaches satisfactory value and varies within the range from 0.87 to 0.95.

The results of the research show that the age does not practically affect the majority of the analyzed variables (Table 3). The trust, the level of which increases with age, is an exception, although statistically significant differences are observed only in case of horizontal trust ($p = 0.01$).

The factors characterizing the inclination towards individual innovative behavior in the whole sample contain all the independent variables with the coefficient of determination $R = 0.81$ and $p = 0.00$. It means that the employees' readiness to perform the innovative activity taking into account the

Table 3. Influence of the respondents' age on the determining factors of innovative behavior

Source: Calculated by the authors.

Indicators of innovation activity	Below 35 years N = 101	36-45 years N = 130	Above 46 years N = 114	Level of significance
Innovative work environment	65.61	66.36	65.04	$p = 0.49$
Managerial support	29.27	29.82	29.22	$p = 0.5$
Stress resistance	35.55	36.67	36.21	$p = 0.26$
Institutional trust	51.94	52.61	52.94	$p = 0.6$
Horizontal trust	93.43	96.44	97.48	$p = 0.01$
Vertical trust	54.72	56.20	56.44	$p = 0.2$

abovementioned factors is 81%.

The determinants of innovative behavior in the age group below 35 years are the innovative work environment and horizontal trust, coefficient of determination – $R = 0.86$ and $p = 0.00$. It means that the youngest employees' (below 35 years) readiness to perform the innovative activity taking into account the abovementioned factors is 86%.

Innovative work environment, managerial support, horizontal and institutional support are the statistically significant factors, which explain the tendency of employees' innovative behavior in the age group from 36 to 45 years. In this case, the coefficient of determination $R = 0.81$, and $p = 0.00$. It means that the employees' (aged from 36 to 45 years) readiness to perform the innovative activity taking into account the abovementioned factors, included in the model, is 81%.

The model looks somewhat differently in the case of the analysis of the oldest employees' (above 45 years) behavior. Their readiness to behave innovatively, apart from the factor of innovative work environment, is determined mainly by institutional trust, stress resistance and managerial support with the coefficient of determination $R = 0.76$ and $p = 0.00$. It means that the oldest employees' readiness to perform the innovative activity is 76%.

So, it can be stated that employees' innovative behavior at the enterprise is the reflection of managerial influence of the management of different organizational levels. In order to increase the effectiveness of managerial support, main personal and professional characteristics of managers were defined, which will help to form the innovative type of behavior of the employees. These are the characteristics, which contribute to the development: ability to build the management system; competent communication in the system "manager-subordinate"; ability to form the responsibility and initiative of the subordinates; ability to effectively motivate the employees; ability to successfully delegate the powers; knowledge of problem solving strategies in management practices; finding the best ways to negotiate and confidently build the relations; constructed response to criticism and ability to get benefit from temporary failures; finding the optimal ways for solving and preventing conflict situations; ability to recognize the nature of

manipulations and influence and to skillfully resist them in the professional activity.

The work of modern manager (management activity) has a range of essential characteristics, which distinguish it from the labor activity of the direct executives. It is determined, first of all, that the manager's professional activity is based on the constant influence of his subordinates in order to motivate them to act, which will drive the enterprise to success. In other words, the manager plans, organizes, motivates and controls the subordinates, is responsible for the state of affairs, but the work is mainly done by the subordinates. From it, it follows that the management activity is mediated in terms of the results of general organizational activity by the diversity of executives' activity. Based on this, the three main aspects are defined in the difficult, multifaceted manager's work (Borman, Voronina, Federman, 1992):

- institutional aspect describes both the managers and the ones to which their managerial influences are directed. In other words, institutional aspect answers the questions: "Who manages?" and "Who is managed?";
- process aspect reflects the progress of solving the management tasks, the process of management functions implementation, peculiarities of management style. In other words, the process aspect of management is directed towards answering the question: "How to perform the management?";
- instrumental aspect characterizes the organizational forms of management, which are used by managers to achieve the set aims (meetings, orders, decrees, plans, timetables, hearing the reports, personal conversations, etc.), i.e. it contains an answer to the question: "Which instruments are used to perform the management?".

The effective answers to the abovementioned questions provide the requirements for the manager's personality, which can be characterized as a set of interconnected "core structures", which reflect, on the one hand, interaction with people, on the other hand, high level of self-regulation.

The first core structure includes the ability to kindle the people's interest, to establish mutual understanding in a team, favorable work environment, as well as a complex of moral and ethical qualities (honesty, fairness, goodwill, etc.). The second core structure of the standard of manager's personality includes three substructures: intellectual characteristics (analyticity, flexibility, logicity, acumen); professional skills and erudition; set of the socially oriented qualities (businesslike manner, social activity, etc.) (Chugunova, 1979).

According to the results of scientific researches based on the interviews and analysis of professional publications, six professional competencies of modern manager were defined: professional motivation; emotional intelligence; time management; self-development; professional skills and "soft skills". The present time increases the requirements for manager's personality, enlarges the set of the constituents of his personality, putting the social and socially meaningful skills. That's why the implementation of "soft skills" becomes particularly relevant. The notion "soft skills" should be understood as social skills of a personality, which can be qualified as interpersonal, as an interaction of leadership qualities, organizational skills and communication skills. A significant number of scientists includes communicative and management skills into this group such as establishing the interpersonal relationships, holding the meetings, persuasion skills, oratory and presentation skills, conducting the discussions, solving the management problems, decision-making, creating the effective teams taking into account the cultural differences, solving the conflict situations.

All the types of trust are based on an effective personnel motivation model, as motivation encourages a certain individual and a team as a whole to achieve personal and collective goal. The impetus of the motivational mechanism is the expected reward, which is an incentive and has certain value for the executive. The motivational mechanism will be effective only in case it is based on economic levers, owing to which the managerial influence will be made in self-regulation mode. So the innovatively-active behavior of the organization's employees is formed – the behavior which provides for their initiative concerning taking part in solving the problems of an enterprise, the

result of which is the creation and implementation of innovations, directed towards the implementation of innovative development tasks.

The ways for increasing work motivation are usually defined as relatively independent directions: material stimulation, increasing the labor force quality, improving the labor management, motivation by taking part in management, motivation with the help of higher-level (moral) stimuli. In order to involve, keep and encourage the employee to work in full force, willing to bring in the element of creativity into their work, in different countries, different approaches are used, both at the level of an enterprise and the state level as a whole. So, in Germany, a surcharge to employees' salary is about 55% of the salary of the hired employee who performs the innovative activity (during 15 years after being hired), about 40% during five years, about 25% for sixth and next years (Volkov, Denysenko, Hrechan et al., 2007).

Salary is the main stimulus to work in Ukraine as well. As the researches done showed an increase in specific weight of old-age employees, its size must be increased depending on work experience, for example, by 1% for every year. On the one hand, it will decrease the turnover, on the other hand, will heighten the old-age employees' interest in implementing the innovations.

To improve the personnel motivation system, it is also recommended to implement a compensation package. Its development provides for the analysis of the demands of the hired employees (for example, by using questionnaires). And taking into account the results obtained and enterprise's financial solvency, to defined the set and amount of the offered benefits. Herewith, it is advisable to form the compensation package based on the principle of "cafeteria" (Stakhiv, 2007). This approach enables different employees to choose the type of compensation themselves, to which they will be motivated, as all people are different, and even when working in the same post, they have different demands, that's why this approach is a compromise for all the employees. Creation of the compensation package based on the principle of "cafeteria" will enable to increase the level of trust, in particular, institutional and horizontal ones.

The effective modern way to enhance the employee's current innovative activity and raise stress resistance are the innovation platforms, which not only give the possibility to get acquainted with and distribute the information about the leading developments, but also develop and implement them with fund raising and project teams' organization. The main idea is the support of new IT and web-technologies, promising radical innovative developments by their creators themselves. Currently, in the innovative system, which quickly develops based on information and communication technologies, such projects can be defined:

- 1) "Corporate university" – enterprise personnel training system (traditional and non-traditional forms of business education, generalizing the experience, knowledge and innovation, which the intellectual property of an enterprise);
- 2) "Career portal" – Internet resource, integrated with social networks (a potential candidate for promising positions in an organization uses informational portals, blogs, web-tests and web-games);
- 3) "Virtual school" – enterprise's internal portal (any employee gets acquainted with the lectures of experts in the studied sphere in an "online" mode, learns by the remote programs of Western business schools (for example, "Coursera"), takes part in remote business games and web-seminars;
- 4) "Employee's social card" – employees' "non-monetary motivation" program (forming the virtual accounts of the employees in an enterprise's "social budget", choice of benefits according to the preliminarily established dif-

ferentiation of their cost, etc.);

- 5) "Gamification" – innovative business concept, which is based on using the approaches, which are peculiar for computer games in software instruments for non-game processes and using the best ideas of loyalty programs, game mechanics and behavioral economy in real business processes.

The research on the peculiarities of the existing approaches to enhancing the innovative activity of Western companies showed that the special unit should be created at an enterprise, for example, unit of development or innovative behavior formation. Its task is to develop a strategy and principles of enhancing the innovative activity at an enterprise. This unit should give the enterprise's employees full information, connected with substantiation and development of innovative proposals and contain clear answers to the questions concerning establishing the responsibility of the units and services, their interaction, clear actions when implementing the innovative projects.

It is advisable, with the aim for the management to make strategically informed decisions concerning the personnel innovative behavior, to start the activity of the unit with defining the factors, which have direct and indirect influence on it. Then, based on defining personal and professional qualities, to complete the managerial staff of units, which perform the innovative activity, which will form the effective motivational system and provide for learning, access to the existing innovations and promotion of their own innovations.

CONCLUSION

The results of the research showed that not the age but the organizational influences determine the innovative behavior of all the groups of employees. But somewhat other factors have an influence on the behavior of certain age groups. In addition to innovative work environment, which has the biggest influence on innovative behavior, in each of the two groups under study, horizontal (trust to colleagues) and vertical (trust to the management) trust are important for the young employees. Innovative behavior of the employees aged 36-45 years is also determined by the trust to colleagues, but more important for them is the support from managers. Among the determining factors of innovative behavior of this group are also institutional trust, i.e. belief in organization's principles, its structure, processes and

systems. This type of trust is very important determinant of the individual innovative behavior in the case of the oldest group of employees. The possibility for implementing the innovations to a large extent depends on the guarantees of organizations, which defined their security and stability in the changing conditions of the external environment. The employees of this age group have the highest stress resistance, which gives the necessary assurance concerning the sense of existence and advantages of an enterprise, where they intend to work, enables to promote it more broadly. The oldest employees need a support from managers.

The analysis of a range of studies and personal observations enabled to form main personal and professional characteristics of managers, which will help to form the innovative type of behavior of the employees: ability to effectively build the system of successful management at an enterprise; competent communication in the system “manager-subordinate”; ability to develop the responsibility and initiative of the subordinates; ability to effectively motivate the employees; ability to successfully delegate the powers; knowledge of problem solving strategies in management practices; finding the best ways to negotiate and confidently build the relations; constructed response to criticism and ability to get benefit from temporary failures; finding the optimal ways for solving and preventing conflict situations; ability to recognize the nature of manipulations and influence and to skillfully resist them in the professional activity.

The ways for increasing work motivation are usually defined as relatively independent directions: material stimulation, increasing the labor force quality, improving the labor management, motivation by taking part in management, motivation with the help of higher-level (moral) stimuli. The researches done show the need to raise the salary depending on work experience, for example, by 1% for every year. On the one hand, it will decrease the turnover, on the other hand, will heighten the old-age employees' interest in implementing the innovations. In order to improve the personnel motivation system, it is also proposed to use the compensation package based on the principle of “cafeteria”.

In order to increase the effectiveness of innovative activity and implementation of the proposed tasks at an enterprise, it is necessary to create a special unit, the task of which will be to develop the strategy and principles of the innovative activity.

REFERENCES

- Borman, D., Voronina, L., & Federman, F. (1992). *Менеджмент. Предпринимательская деятельность в рыночной экономике* [Menedzhment. Predprinimatelskaya deyatel'nost' v rynochnoy ekonomike]. Ghamburgh.
- Carmeli, A., Meitar, R., & Weisberg, J. (2006). Self-leadership skills and innovative behavior at work. *International Journal of Manpower*, 27(1), 75-90. <https://doi.org/10.1108/01437720610652853>
- Chugunova, E. S. (1979). *Формирование и развитие технического творчества молодых рабочих* [Formirovanie i razvitie tekhnicheskogo tvorchestva molodykh rabochikh]. Moscow: Vysha Shkola.
- Cingöz, A., & Akdogan, A. Asuman (2011). An empirical examination of performance and image outcome expectation as determinants of innovative behavior in the workplace. *Procedia Social and Behavioral Sciences*, 24, 847-853. <https://doi.org/10.1016/j.sbspro.2011.09.099>
- De Jong, G., & Woolthuis, K. R. (2008). The institutional arrangements of innovation: antecedents and performance effects of trust in high-tech alliances. *Industry and Innovation*, 15(1), 45-67. <https://doi.org/10.1080/13662710701858520>
- De Jong, J., & Hartog, D. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Manage-*
- ment, 10(1), 41-64. <https://doi.org/10.1108/14601060710720546>
- Garstka, T., Hummert, M. L., & Branscombe, N. (2005). Perceiving age discrimination in response to intergenerational inequity. *Journal of Social Issues*, 61, 321-342. <https://doi.org/10.1111/j.1540-4560.2005.00408.x>
- Golovin, A. (2013). *Геймификация для крупных компаний* [Geimifikatsiya dlya krupnykh kompaniy]. Retrieved from <https://adindex.ru/publication/tools/2013/08/14/101270.phtml>
- Hsu, M. L. A., Hou, S. T., & Fan, H. L. (2011). Creative Self-efficacy and Innovative Behaviour in a service setting: optimism as a

- moderator. *Journal of Creative Behaviour*, 45(4), 258-272. <https://doi.org/10.1002/j.2162-6057.2011.tb01430.x>
10. Hu, M.-L.M., Horng, J.-S., & Sun, Y.-H.C. (2009). Hospitality teams: Knowledge sharing and service innovation performance. *Tourism Management*, 30(1), 41-50. <https://doi.org/10.1016/j.tourman.2008.04.009>
 11. Jafri, M. H. (2010). Organizational commitment and employee's innovative behavior: A study in retail sector. *Journal of Management Research*, 10(1), 62-68. Retrieved from <https://search.proquest.com/openview/0314d38168e5ac2486d91f352d02c78c/1?pq-origsite=gscholar&cbl=55395>
 12. Kapitonov, E. A., Zinchenko, G. P., & Kapitonov, A. E. (2005). *Корпоративная культура: теория и практика [Корпоративна культура: теорія і практика]*. Moscow: Alfa-Press.
 13. Kigel, V. R. (2003). *Математичні методи ринкової економіки [Математичні методи ринкової економіки]*. Kyiv: Kondor.
 14. Kobiak, O. V. (n.d.). *Определение понятия инновационное поведение [Opredelenie ponyatiya innovatsionnoye povedenie]*. Retrieved from http://mirslivare.com/content_soc/innovacionnoye-povedenie-11379.html
 15. Lipych, L. G. (2017). *Взаємозалежність ефективності діяльності підприємства та рівня довіри до працівника [Vzajemozalezhnist efektyvnosti diialnosti pidpriemstva ta rivnia doviry do pratsivnyuka]*. *Ekonomichnyi chasopys Skhidnoievropeiskoho natsionalnoho universytetu imeni Lesi Ukrainky*, 4(12), 45-52. <https://doi.org/10.29038/2411-4014-2017-04-45-52>
 16. Loon Hoe, S. (2007). Is interpersonal trust a necessary condition for organisational learning? *Journal of Organizational Transformation and Social Change*, 4(2), 149-156. https://doi.org/10.1386/jots.4.2.149_1
 17. Morris, M. G., Venkatesh, V., & Ackerman, P. L. (2005). Gender and age differences in employee decisions about new technology: An extension to the theory of planned behavior. *IEEE Transactions on Engineering Management*, 52(1), 69-84. <https://doi.org/10.1109/TEM.2004.839967>
 18. Patrickson, M., & Hartmann, L. (1995). Australia's ageing population: implications for human resource management. *International Journal of Manpower*, 16(5/6), 34-46. <https://doi.org/10.1108/01437729510095935>
 19. Peterson, S. J., & Spiker, B. K. (2005). Establishing the positive contributory value of older workers: a positive psychology perspective. *Organizational Dynamics*, 34(2), 153-167. <https://doi.org/10.1016/j.orgdyn.2005.03.002>
 20. Posthuma, R. A., & Campion, M. A. (2009). Age stereotypes in the workplace: common stereotypes, moderators, and future research directions. *Journal of Management*, 35(1), 158-188. <http://dx.doi.org/10.1177/0149206308318617>
 21. Rizzuto, T. E. (2011). Age and technology innovation in the workplace: Does work context matter? *Computers in Human Behavior*, 27(5), 1612-1620. <https://doi.org/10.1016/j.chb.2011.01.011>
 22. Scott, K. D., & Cook, B. (1983). The relationship between employee age and interpersonal trust within an organizational context. *Review of Business & Economic Research*, 18(3), 71-82. Retrieved from https://works.bepress.com/dow_scott/11/
 23. Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580-607. <https://doi.org/10.5465/256701>
 24. Stakhiv, O. (2007). *Оцінка мотиваційного потенціалу персоналу підприємства в контексті реалізації вимог міжнародного стандарту управління якістю ISO 9001 [Otsinka motyvatsiynoho potentsialu personalu pidpriemstva v konteksti realizatsii vymoht mizhnarodnoho standartu upravlinnia yakistiu ISO 9001]*. Retrieved from <http://personal.in.ua/article.php?id=562>
 25. State Statistics Service of Ukraine (n.d.). Official website. Retrieved from <http://www.ukrstat.gov.ua/>
 26. Stone, D. L., & Tetrick, L. E. (2013). Understanding and facilitating age diversity in organizations. *Journal of Managerial Psychology*, 28(7/8), 725-728. <https://doi.org/10.1108/JMP-07-2013-0226>
 27. The State Statistics Service of Ukraine (2017). *Чисельність наявного населення України на 1 січня 2017 року [Chyselnist nayavnogo naseleння Ukrainy na 1 sichnia 2017 roku]*. Retrieved from http://database.ukrcensus.gov.ua/PXWEB2007/ukr/publ_new1/2017/zb_chnn_0117.pdf
 28. Turner, P., Turner, S., & Van De Walle, G. (2007). How older people account for their experiences with interactive technology. *Behavior and Information Technology*, 26, 287-296. <https://doi.org/10.1080/01449290601173499>
 29. Volkov, O. I., Denysenko, M. P., & Hrechak, A. P. (2007). *Економіка та організація інноваційної діяльності [Ekonomika ta orhanizatsiia innovatsiynoi diialnosti]*. Kyiv: Tsentr uchbovoi literatury.
 30. WHO (1993). *Aging and Working Capacity, WHO Technical Report Series*. World Health Organization, Geneva. Retrieved from http://apps.who.int/iris/bitstream/handle/10665/37003/WHO_TRS_854.pdf;jsessionid=3346AEC7286B123FD49BC9A2C5790D89?sequence=1
 31. Wu, C. H., Parker, S. K., & De Jong, J. P. J. (2014). Need for Cognition as an Antecedent of Individual Innovation Behavior. *Journal of Management*, 40(6), 1511-1534. <https://doi.org/10.1177/0149206311429862>
 32. Yesil, S., & Sozbilir, F. (2013). An Empirical Investigation into the Impact of Personality on Individual Innovation Behaviour in the Workplace. *Procedia – Social and Behavioral Sciences*, 81, 540-551. <https://doi.org/10.1016/j.sbspro.2013.06.474>
 33. Yuan, F., & Woodman, R. W. (2010). Innovative Behavior in the Workplace: The Role of Performance and Image Outcome Expectations. *Academy of Management Journal*, 53(2), 323-342. Retrieved from https://www.jstor.org/stable/25684323?seq=1#page_scan_tab_contents