

УДК 331.58:331.445

JEL Index: D04, M14, M54

О. Zakharova

О. Захарова

## RAPID DIAGNOSTICS OF EMPLOYER BRAND APPEAL

## ЕКСПРЕС-ДІАГНОСТИКА ПРИВАБЛИВОСТІ БРЕНДА РОБОТОДАВЦЯ

*The aim of the article is to develop a methodology of rapid diagnostics of employer brand appeal. Scientific novelty of this work consists in the characteristics of employer brand nature and determination of indicators to evaluate internal component of employer brand; quantitative determination of values borders depending on the degree of employer brand appeal for each of the offered indicators. The use of this methodology will allow to evidently determine the degree of employer brand appeal, which can be high, middle or low. The indicators include nine indices: retirement turnover ratio, staff stability factor, the factor of personnel stability, average age of employees, the level of enterprise staffing, the rates of prospective employees turnover, the rate of ROI (return of investment), the rates of productivity growth, the rates of enterprise profits growth. The choice of these indicators is related to the necessity of complex description of all personnel management's aspects. For every chosen indicator in this work the decoding of semantic loading of possible quantitative values is conducted. The main attention is paid to the maximum values of indicators, the attainment of which will negatively affect on the work of the enterprise and internal constituent of employer brand. Further researches must be directed on the development of concrete measures on the increase of internal component of employer brand appeal, the expansion of the amount of indicators of such estimation and the development of the methodology for evaluating external constituent of employer brand.*

**Keywords:** employer brand, image, company, personnel, employee turnover, human resource management, indicators of evaluation.

**Formulation of the problem.** Despite the dominance in the modern world of wealth over spiritual, increasing the value and importance of acquiring these social and human values like security, care, safety, responsibility, stability, reliability, partnership, decent standard and openness of wage policy, the possibility of personal development, guarantee employment and earning etc. Particular relevance they acquire during the exacerbation crisis situations in the country economy and the world economy. Guarantor of all listed undoubtedly favor the employer, in this case, the greater extent it is able to provide decent working conditions, the more longer productive and committed be work at the enterprise perspective professional. It is under these conditions may achieve a competitive and profitable activities of any company. Thus, creating an attractive form and honest image of the employer or its brand, and its strict adherence is the actual demand of present.

Brand of employer is a difficult concept that reflects the complex relationship to the company by its employees (degree of loyalty, the desire to continue to work at the plant, pride in belonging to the company, etc.) and relationship to its customers, partners and competitors, candidates for vacancies and more. The first part of attitude describes the inner, the second – the exterior of the attractiveness of the employer brand. Both components are closely connected with each other and very important for creating a positive and attractive image of the employer. However, if the external component forms the only public opinion about the company, the interior – a direct impact on the efficiency of its industrial and economic activities. Thus, determination, justification, diagnostics and management of the internal part of the attractiveness of the employer brand is a very important condition for improving the image of the company and formation of its production and financial-economic efficiency and competitiveness.

**Analysis of recent researches and publications.** In management environment, the term "employer brand" was introduced relatively recently – in the early 90's XX century. The founder of this direction of research in the general theory of branding is considered S. Barrow [2; 11], whose thoughts further developed T. Ambler [10], L. Chernatoni [12], S. Harding [13], B. Mynchynhton [6], G. Morgan [7], R. Mosley [11]. In domestic science research various aspects of the formation of employer brand is dedicated to the works of L. Balabanova and A. Sardak [1], A. Pasyeky and V. Krasnomovets [8], A. Yastremskaya, A. Timonina and K. Timonina [9]. However, despite a wide range of research related to various aspects of the formation of employer brand and still remain open many questions regarding the technology of creating employer brand and quantify degree of its attractiveness.

**The purpose of the article** is to identify the components of forming the employer brand and development rapid diagnostics for its attractiveness.

**The presentation of the main research material.** Creating and distributing an attractive employer brand is one of the defining conditions to achieve future development of the enterprise, its entry into competitiveness for a long time. Long-term positive effect will not depend on how detailed and will be professionally formulated and proved the main components of the brand, but mostly on how many talented and promising professionals using these attributes will be involved or ultimately enshrined in the company's staff. This is particularly important in conditions when to find and persuade talented, highly professional and very qualified personality in the feasibility of working in this company is very difficult even if sufficient amounts of labor supply at the primary and secondary labour markets.

The concept of brand – it is purely a marketing term that symbolizes the complex information about the company, product or service; popular, legally protected symbols that are easily recognizable. That is, the brand is a coherent set of concepts generalize the way people thought about the relevant product, service, company or individual. A significant role in this complex concept plays such its part as employer brand (HR-branding) – a set of functional, physical, social and psychological benefits that the employee may receive from working on a particular company [4, p. 310]. At the same time the employer brand also understand the totality of an enterprise's efforts on interaction with existing and potential employees, making it an attractive place to work and actively image in the eyes of investors, partners, potential employees and competitors. In other words, it is set of what the enterprise is associated in the market as the employer.

The employer brand has to perform the basic function – to form a positive image and implicit trust that provides the perception of the company as a reliable partner, a responsible employer, attractive to its target audience today and in the future. There is a pattern – the stronger and more attractive is the company brand as an employer, the less the cost of hiring, retention and turnover rates, it will carry. Providing these conditions will enable senior management fully concentrate their efforts and resources on promising strategic development of the company that over time will further arranged through its brand as an employer and will gradually contribute to the trends to increase loyalty and trust of the staff to it. And the staff formed a clear idea of its possibilities for professional and career growth in the company and ways of their full practical realization.

Employer brand is a complex concept, the formation of which is carried out on inner and outer levels simultaneously, Fig. 1.

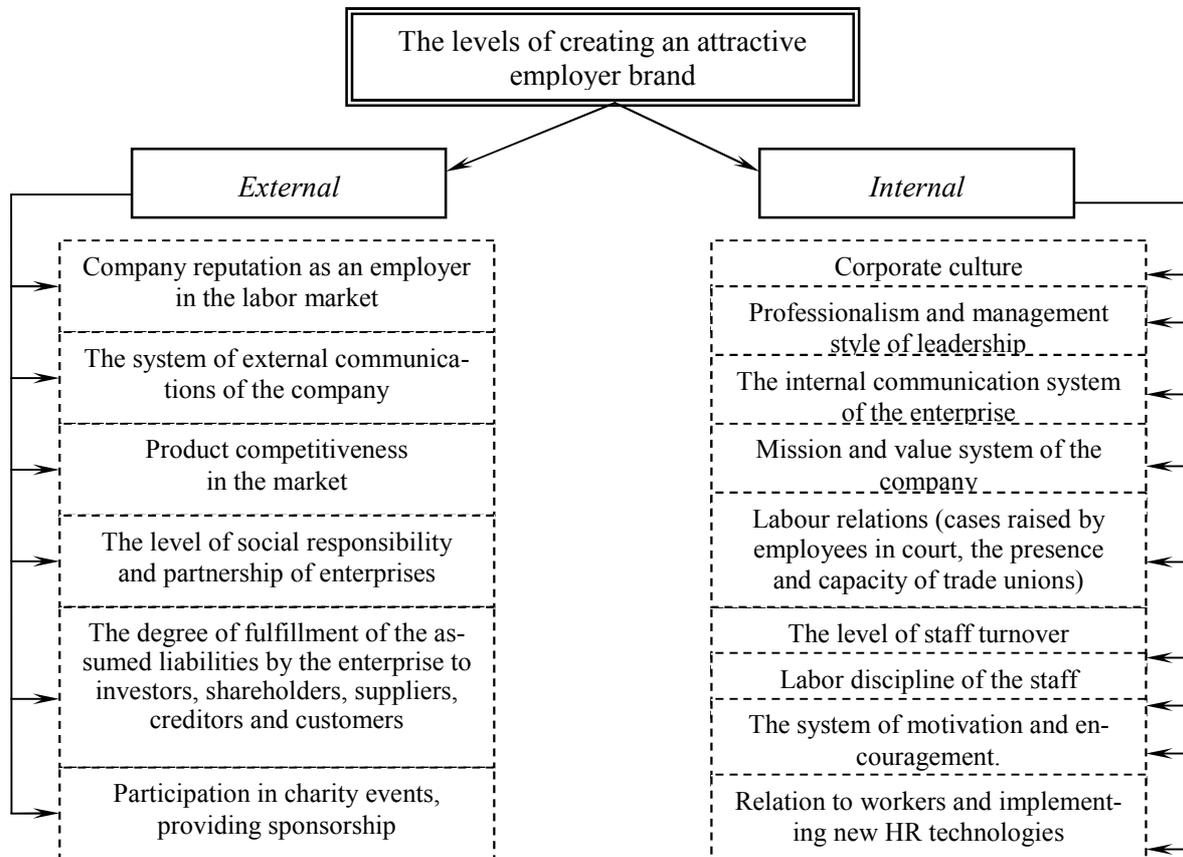
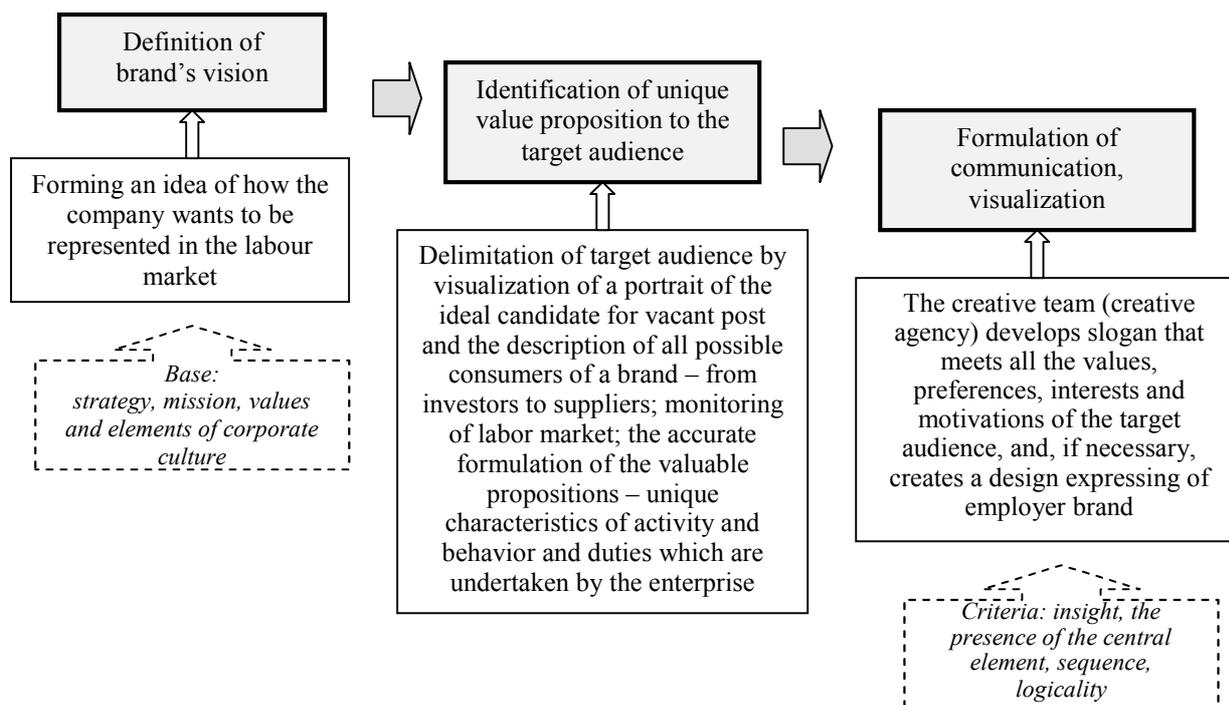


Fig. 1. Levels and factors of creating an attractive employer brand

Factors of external level gradually create in society general idea about reputation of the enterprise as employer, and their positive impact can be estimated the number of persons interested to work at the enterprise, and, first of all, highly professional and skilled persons. Factors of internal level promote formation of a confidential situation, favorable moral and psychological microclimate in collective, loyalty of personnel to the enterprise. Indicators of employee turnover can measure influence of these factors. At the same time internal factors also influence the external environment, serve as a peculiar bait for candidates for employment. The situation when an external and internal brand of the enterprise as the employer coincide is ideal. In this case, the candidate who was employed, after a certain time of labor will not change his mind on the opposite, will not be disappointed.

Creation of employer brand is consistently carried out in three stages, Fig. 2.



**Fig. 2. The stages of creating an attractive employer brand**

Productivity of creation of employer brand is influenced by such conditions:

1) creation, formalization and bringing to personnel of corporate ethics and culture, history of existence of the enterprise; the management and top management have to show on own example use and propagandize elements of corporate culture;

2) involvement of personnel in decision-making processes is one of effective forms of motivation and promotes interest of workers in increase of efficiency of the general activity of the enterprise and achievement of competitiveness by it;

3) monitoring the ratio of attracted resources on the formation of employer brand and expenses that the company suffers from the movement of personnel;

4) providing maximum opportunities for comprehensive professional and personal development of staff both within the enterprise and beyond, targeting the personnel management system at its highest level – talent management that will comprehensively promote the accumulation of human capital and gradually bring social and economic return on funds invested to professional development;

5) the level of compensation package which the company offers to candidates for the position eloquently testifies about its capabilities and reputation. The transition to a more prestigious company may not be accompanied by the expected growth of wages, but such decision will be compensated by other advantages. Thus, the work in the company with an attractive employer brand usually increases the value of professional resume.

Determination or at least approximation to understanding the existing degree of attractiveness of the employer brand in the eyes of its own staff, that its internal component, is a complicated process that requires consideration of many diverse aspects. Existing methods of assessment [14] based largely on qualitative and

not quantitative component that does not allow a comprehensive assessment of the attractiveness of an employer brand. At the same time it is very important to ensure the company's management by method for rapid diagnostics degree of attractiveness of own employer brand which would allow quickly and without wasting time and resources to monitor the achieved level of satisfaction of employees with their work in the company. In order to provide these conditions is offered to choose indicators that quantify allows management to get closer to understanding the significance of the company for employees, which is manifested in their desire to work on it and productive return of this work. For each of the nine selected indicators was developed scale allowing to assess the degree of attractiveness of employer brand, Fig. 3. At the same time is proposed to measure attractiveness as high, medium and low.

*The degree of attractiveness of employer brand for employees (internal component)*

<i>High</i>		<i>Medium</i>		<i>Low</i>	
<b>Turnover of leaving coefficient, %</b> →					
0	10	15	100		
<b>Coefficient of staff constancy, %</b>					
← 100	95	90	0		
<b>Coefficient of staff stability, %</b>					
← 90	80	30	0		
<b>The average age of employees, years</b> →					
20	45	60	90		
<b>The level of staffing company personnel</b> →					
<1	1	>1			
<b>Turnover coefficient of perspective employees, %</b>					
← 0	3	7	50		
<b>Index ROI, %</b> →					
150	30	20	>20		
<b>The growth rate of labor productivity, %</b>					
← <150	120	100	<100		
<b>The growth rate of company profits, %</b>					
← <150	120	100	<100		

**Fig. 3. Scale of rapid diagnostics of internal component attractiveness level of the employer brand**

Value of the coefficient of turnover disposal is one of the common indicators that comprehensively describes the reaction of company staff on established by leadership employment conditions and provided labor relations, illustrates the satisfaction level of employees by the administrative decisions taken by man-

agement. At the same time concrete conclusions regarding the quantitative level of this indicator is largely depend on that category of employees for which it was designed.

So, if the object of study were young (under 30 years), prospective skilled workers and the most experienced and highly qualified specialists in professional development of which during the last two or three years were invested funds, then will be positive dynamics to reducing the value of this indicator with its maximum permissible limit of no more than 0-2 % [4]. In all other cases is acceptable to bring the upper limit of this rate to 10 %, which will promote the improvement and rejuvenation of staff.

Level of constancy coefficient of staff characterizes the degree of staff satisfaction with pay and conditions of labor, employment and social benefits at the enterprise. At the same time the most important is definition the degree of loyalty of young perspective skilled workers who have been accepted during last two years. Increase in time of specific weight of young workers who have worked at the enterprise one year can also indirectly indicate about the correctness of the chosen enterprise development strategies and growth of the prestige of the employer brand. That is why quantitative limit that defines a high degree of attractiveness of employer brand was limited by range of constancy staff coefficient in the range of 95-100 %. At the same time these 5 % are taken away on those workers who for certain objective reasons will not be able to bring any social and economic benefit to the enterprise.

Objectivity calculations and interpretation of staff stability values coefficient significantly depends on the total period of the existence and functioning of the enterprise for which the assessment of attractiveness the employer brand is carried out. If the index value is calculated for a young company, which operates for 7-10 years, then the boundary values of this indicator that characterize the zone of high attractiveness of employer brand should be quite high – in the range of 80 to 100 %. If the company has a long history of its existence (over 20 years), then the boundary values for the same zone should be in the range of 70-90 %. For such companies bringing the index value to 100 % would indicative of complete lack of the annual trends of update and rejuvenation of personnel that may adversely affect the possibilities of further development.

The average age of enterprise employees is very eloquent indicator of the degree of internal attractiveness of the employer brand. Only companies with high brand attractiveness may be interested and keep young perspective highly qualified personnel for a long time. At the same time, in order for the future to ensure getting value of this indicator in the desired range of 20 to 45 years, the company has constantly pursue a policy of staff rejuvenation and primarily those categories whose work directly affects the competitiveness and efficiency of activity. Strengthening factor that allow the most fully realize this opportunity is the external positive component of the employer brand attractiveness, which creates conditions for the selection of the best and most competitive candidates in the labor market.

At the same time to admire staff rejuvenation procedure is impractical and even dangerous because of the threat of a unique experience loss and, consequently, a gradual reduction of enterprise competitive edges. That is why an important condition of personnel policy should be compliance closer to the optimal age structure of staff in the enterprise, where the vast majority must represent highly skilled workers, for example, 10-20 % – young perspective professionals (under 30 years), 30-40 % – middle-aged professionals (aged 30-45 years), 40-60 % – workers who are carriers of the unique professional experience, knowledge and corporate culture of the company (over the age of 45 years). Compliance with such structure will help to create a clear system of succession experience, professional knowledge and skills.

The level of company staff manning characterizes the proportion of jobs that are fully staffed in the unit or the enterprise. If the value of this index is 1.0, it means one hundred percent availability of personnel available jobs and indirectly characterizes a sufficient level of demand for the products of the company. But at the same time it should be concluded about the lack at the enterprise of actions for active spread the movement of multimachine service and acquisition by workers of polyvalent qualification, which greatly reduces the possibilities for their perspective development. If the level of this index exceeds 1.0, it may indicate about multi-shift mode of work at the enterprise and otherwise is related to the technological features of workplaces service or with the low level of enterprise personnel sufficiency with jobs, that corresponds to the low level of employer brand attractiveness. If the value of this index is less than 1.0, it can be a sign of positive trends expansion of activity areas, multimachine service and combination of professions that has become possible thanks to introduction of effective system of professional development, the rational organization of work and effective system of personnel motivation [3].

The coefficient of perspective workers turnover, i.e. those of them in which professional and personal development were invested funds over the last three years [5, p. 242], is a very important factor for the company. So, the fluidity of perspective workers is very negative phenomenon for the enterprise, because it re-

duces the opportunity for return investment and minimize the probability of getting further economic pay-back of invested funds. However, the mechanism of staff turnover is an instrument of renewal and rejuvenation of staff and can be considered a positive phenomenon on condition of its insignificant level (less than 3 %) and the adoption in the company in place of retired workers professionals with potentially large opportunities, considerable experience of practical work and high motivation to achieve purposes [5]. In all other cases, management has to make efforts for minimization of fluidity coefficient value of perspective workers.

One of the three resulting indicators which are quantitatively characterizing influence of degree of employer brand attractiveness on the final results of its operations is an indicator of ROI (Return of investment) that allows to define and estimate productivity of training employees in monetary terms. Modern researches of investment intensity into the human capital by the enterprises of different types of economic activity have allowed to establish ROI indicator limits. Thus, as its minimum acceptable level was determined 20 % which decrease will lead to a sharp reduction of investment efficiency in human capital and even total loss of invested funds. For the enterprises which take stable positions in the market for a long time the level of ROI indicator has to fluctuate within 20-150 %. The enterprises using strategy of expansion of market share have to be guided by ROI indicator level within 150-200 % or 300-500 %.

The second resultant indicator offers to choose growth rates of labor productivity which conclusions are almost identical with the third chosen productivity indicator – growth rates of enterprise profit. In a case when growth rates of labor productivity are less than 100 %, there is reduction of labor productivity level at the enterprise according to the period, which was selected as the calculation base. In any case, it is rather negative moment and demonstrates reducing the effectiveness of enterprise production activity, to what with high probability could lead deteriorations of labor organization; the fall of the professional and qualification level of the personnel; reduction the volume of production output, which has resulted from sharp decline in demand for its in the market; deterioration of using working time level, etc. The action of each these factors could have both individual and complex negative effect on the falling of labor productivity overall level. In this case the reasons of productivity level reduction have to be carefully established and measures for stabilization of a situation are carefully introduced.

Compliance with labor productivity growth of 100% indicates a constant level of this indicator in the reporting period. Such value during the short period of time can demonstrate achievement of economic stability condition of the enterprise and to be characterized as positive. If the constant level of labor productivity growth is observed gradually over several years, the company management should take effective measures to increase labor productivity returns. The list of such activities must be formed on the basis of a comprehensive research of the main reasons for the lack of positive trends in the dynamics of labor productivity and focus efforts on the most perspective and viable ways of increasing labor productivity level (e.g., increasing wages, strengthening and implementation of new tools for moral and material motivation, replacement of outdated production technologies, improvement of working conditions).

If the results of the analysis found that productivity growth every year for a long period of time exceed 100 %, this trend is very positive and is the basis for allegations of a real opportunity for a radical improvement of the financial and economic situation of the company and increase the level of its competitiveness. In the case when there is a one-time (one year or over several non-contiguous years in a long period of time) growth of labour productivity, it is necessary to establish the reasons which in each case led to these positive trends, to develop actions for their fixing and further replication in time.

**Conclusions.** So, the proposed rapid diagnostics method of the employer brand attractiveness degree provides the enterprise with easy to use scale of internal component assessment of the employer brand attractiveness. The results of this assessment should be laid in basis of development strategy of economic and financial stabilization and improvement of the company. Further researches have to be directed to justification of concrete actions for increase the internal component of employer brand attractiveness degree, justification of its external component indicators and expand the number of such diagnostics indicators.

#### References

1. Balabanova, L. V., Sardak, O. V. (2014), "Diagnostics of the competitiveness of enterprise-employer brand" ["Diagnostyka konkurentospromozhnosti brendu pidpryyemstva-robotodavcy"], *Ekonomichnyj chasopys-XXI*, No. 1-2 (1), pp. 94–97.
2. Barrow, S., Mosley, R. (2007), "Employer brand. The best of brand management – to work with staff". Trans. from Eng. ["Brend robotodatelja. Luchshee iz brend-menedzhmenta – v rabotu s kadrami"]. Per. s angl., Gruppya IDT, Moscow: 195 p.

3. Zakharova, O. V. (2014), "An analysis of labor indicators" ["Analiz trudovykh pokaznykiv"], DonNTU, Donetsk, 461 p.
4. Zakharova, O. V., Shumayeva, O. O., Solovczova, O. P. (2014), "Change management" ["Upravlinnya zminamy"]. LANDON-XXI, Donetsk, 453 p.
5. Zakharova, O. V. (2010), "Management by investment in human capital: methodology, evaluation, planning" ["Upravlinnya investuvanniam u lyudskyy kapital: metodologiya, otsinka, planuvannya"], DRUK-INFO, Donetsk, 378 p.
6. Minchington, B. (2011), "HR-brand. How to become a leader. Building a dream company" ["HR-brend. Kak stat liderom. Stroim kompaniju mechty"], Junajted Press, Moscow, 280 p.
7. Morgan, G. (2006), "The image of the organization: eight models of organizational development". Trans. from Eng. ["Imidzh organizacii: vosem' modelej organizacionnogo razvitija". Per. s angl.], Vershina, Moscow, 416 p.
8. Pasyeka, A. S., Krasnomovecz, V. A. (2012), "HR-branding in human resources system" ["HR-brendyng u systemi upravlinnya personalom"], *Naukovyy visnyk Chernigivskoho derzhavnoho instytutu ekonomiky i upravlinnya. Seriya «Ekonomika»*, (4), pp. 132–137.
9. Yastrems'ka, O. M., Timonin, O. M., Timonin, K. O. (2013), "Brands of industrial enterprises: formation and efficiency of using" ["Brendy promyslovykh pidpryyemstv: formuvannya ta efektyvnist' vykorystannya"], KhNEU, Khar'kiv, 243 p.
10. Ambler, T., Barrow, S. (1996), "The employer brand", *The Journal of Brand Management*, Vol. 4, pp. 185–206.
11. Barrow, S., Mosley, R. (2005), "The employer brand: bringing the best of brand management to people at work", Wiley, 232 p.
12. Chernatony, L. (2006), "From brand vision to brand evaluation: the strategic process of growing and strengthening brands". Butterworth Heinemann, Oxford, 320 p.
13. Harding, S. (2004), "Employer branding". International survey research, available at: [www.isrsur-veys.com/en/pdf/insight/employerbranding.pdf](http://www.isrsur-veys.com/en/pdf/insight/employerbranding.pdf)
14. LinkedIn (2003), "Employer brand playbook. 5 steps to grafting a highly social talent brand", available at: [https://business.linkedin.com/content/dam/business/talent-solutions/global/en\\_US/site/pdf/playbooks/linkedin\\_employer\\_brand\\_playbook\\_us\\_en\\_130702.pdf](https://business.linkedin.com/content/dam/business/talent-solutions/global/en_US/site/pdf/playbooks/linkedin_employer_brand_playbook_us_en_130702.pdf)

#### Список використаної літератури

1. Балабанова Л. В. Діагностика конкурентоспроможності бренду підприємства-роботодавця / Л. В. Балабанова, О. В. Сардак // Економічний часопис-XXI. – 2014. – № 1-2 (1). – С. 94–97.
2. Бэрроу С. Бренд работодателя. Лучшее из бренд-менеджмента – в работу с кадрами / С. Бэрроу, Р. Мосли ; пер. с англ. – М. : Группа ИДТ, 2007. – 195 с.
3. Захарова О. В. Аналіз трудових показників: навч. посіб. / О. В. Захарова. – Донецьк : ДонНТУ, 2014. – 461 с.
4. Захарова О. В. Управління змінами: навч. посіб. / О. В. Захарова, О. О. Шумаєва, О. П. Соловцова. – [2-ге вид., перероб. та доповн.]. – Донецьк : ЛАНДОН-XXI, 2014. – 453 с.
5. Захарова О. В. Управління інвестуванням у людський капітал : методологія, оцінка, планування : [монографія] / О. В. Захарова. – Донецьк : ДРУК-ІНФО, 2010. – 378 с.
6. Минчингтон Б. HR-бренд. Как стать лидером. Строим компанию мечты / Б. Минчингтон ; пер. с англ. – М. : Юнайтед Пресс, 2011. – 280 с.
7. Морган Г. Имидж организации : восемь моделей организационного развития / Г. Морган ; пер. с англ. Н. Лапиной. – М. : Вершина, 2006. – 416 с.
8. Пасека А. С. HR-брендинг у системі управління персоналом / А. С. Пасека, В. А. Красномоєць // Науковий вісник Чернігівського державного інституту економіки і управління. – 2012. – Вип. 4. – С. 132–137. – (Серія «Економіка»).
9. Ястремська О. М. Бренди промислових підприємств: формування та ефективність використання : [монографія] / О. М. Ястремська, О. М. Тімонін, К. О. Тімонін. – Х. : ХНЕУ, 2013. – 243 с.
10. Ambler T. The employer brand / T. Ambler, S. Barrow // *The Journal of Brand Management*. – 1996. – Vol. 4. – P. 185–206.
11. Barrow S. The employer brand: bringing the best of brand management to people at work / S. Barrow, R. Mosley. – Wiley, 2005. – 232 p.
12. Chernatony L. From brand vision to brand evaluation : the strategic process of growing and strengthening brands / L. Chernatony. – Oxford : Butterworth Heinemann, 2006. – 320 p.
13. Harding S. Employer branding. International survey research [Electronic resource] / S. Harding // Seminar in London. – June, 2004. — Mode of access: [www.isrsurveys.com/en/pdf/insight/employerbranding.pdf](http://www.isrsurveys.com/en/pdf/insight/employerbranding.pdf)
14. LinkedIn. Employer brand playbook. 5 steps to grafting a highly social talent brand [Electronic resource]. – Mode of access: [https://business.linkedin.com/content/dam/business/talent-solutions/global/en\\_US/site/pdf/playbooks/linkedin\\_employer\\_brand\\_playbook\\_us\\_en\\_130702.pdf](https://business.linkedin.com/content/dam/business/talent-solutions/global/en_US/site/pdf/playbooks/linkedin_employer_brand_playbook_us_en_130702.pdf)

О. Захарова

### ЕКСПРЕС-ДІАГНОСТИКА ПРИВАБЛИВОСТІ БРЕНДУ РОБОТОДАВЦЯ

*Метою статті є розробка методики експрес-діагностики привабливості бренду роботодавця. Наукова новизна міститься у характеристиці сутності бренду роботодавця та визначенні індикаторів оцінки внутрішньої складової бренду роботодавця; кількісне визначення для кожного з індикаторів граничних меж значень залежить від ступеня привабливості бренду роботодавця. Використання запропонованої методики дозволить наочно визначити ступінь привабливості бренду роботодавця, який може бути високим, середнім або низьким. До складу індикаторів віднесено дев'ять показників: коефіцієнт обороту з вибуття, коефіцієнт сталості кадрів, коефіцієнт стабільності кадрів, середній вік працівників, рівень укомплектованості підприємства персоналом, коефіцієнт плинності перспективних працівників, показник ROI (повернення на інвестиції), темпи зростання продуктивності праці, темпи зростання прибутку підприємства. Вибір цих показників пов'язаний з необхідністю комплексної діагностики персоналу. Для кожного показника здійснено інтерпретацію можливих кількісних значень. Найбільшу увагу присвячено максимальним значенням показників, досягнення яких негативно позначиться на роботі підприємства і внутрішньої складової бренду роботодавця. Подальші дослідження мають бути спрямованими на розробку конкретних заходів щодо збільшення внутрішньої складової привабливості бренду роботодавця, розширення кількості показників оцінки та розробку методики оцінки зовнішньої складової бренду роботодавця.*

**Ключові слова:** бренд роботодавця, імідж, підприємство, персонал, плинність кадрів, управління персоналом, показники оцінки.

*Статтю представляє д.е.н. Захарова О. В., професор кафедри менеджменту, Черкаський державний технологічний університет.*