

УДК 657.421.3

**CREATING A COMPETENCY MODEL FOR THE ASSESSMENT OF EXPERTS ON FOREIGN TRADE AND INNOVATION**

O.M. Arapova

*Odessa National Polytechnic University, Odessa, Ukraine*

*Арапова О.М. Створення моделі компетенцій для оцінки фахівців із зовнішньоекономічної та інноваційної діяльності.*

Розглянуто основні особливості компетенцій та моделей компетенцій, застосування яких важливо здійснювати при побудові моделі компетенцій. Запропоновано основні компетенції для менеджерів інноваційної та зовнішньоекономічної діяльності. Систематизовано компоненти, щодо формування придатності до трудової діяльності працівника на прикладі одних із ключових спеціальностей, що сприяють розвитку та диверсифікації підприємства та об'єднання їх в одну цілісну модель компетенцій. Обґрунтовано доцільність впровадження оцінювання працівників на основі моделі компетенцій на підприємстві.

*Ключові слова:* модель компетенцій, компетентнісний підхід, професійні компетенції

*Арапова Е.Н. Создание модели компетенций для оценки специалистов внешнеэкономической и инновационной деятельности.*

Рассмотрены основные особенности компетенций и моделей компетенций, применение которых важно осуществлять при построении модели компетенций. Предложены основные компетенции для менеджеров инновационной и внешнеэкономической деятельности. Систематизированы компоненты, по формированию годности трудовой деятельности работника на примере одних из ключевых специальностей, способствующих развитию и диверсификации предприятия и объединения их в одну целостную модель компетенций. Обоснована целесообразность внедрения оценки работников на основе модели компетенций на предприятии.

*Ключевые слова:* модель компетенций, компетентностный подход, профессиональные компетенции

*Arapova O.M. Creating a competency model for the assessment of experts on foreign trade and innovation.*

The main features of competencies and competency models, the use of which is important to carry out the construction of the competency model. It has been proposed core competencies for managers of innovation and foreign trade. Systematized components on the formation of work-life employee on an example of one of the key specialties contribute to the development and diversification of businesses and combining them into one holistic model of competence. The expediency of the introduction of assessment of employees on the basis of competence models in the enterprise.

*Keywords:* model of competence, competence approach, professional competences

The urgency of an issue is that today's volatile market environment requires that organizations moving to a qualitatively new level of methods their activities. For each newly created company, as existing, continuous development and innovation, today, is a driving force for progress within the country and to conduct foreign trade activities, entering new markets. Successful organizations create new knowledge, skills, abilities, transfer them within the company and quickly update the range of goods and services. The competence of the staff turned into a strategic factor of innovation development of the organization [1].

Process development personnel should have a permanent nature, so the managers of all levels face the task of forming a unified model of competencies for each specialty, and integrated for the organization as a whole.

The main objective of this study is to analyze the modern labour market, to create a model of competencies for the key positions of the companies, directed on innovative development and exit to international level, to justify the use of competency models for specific positions.

**Analysis of recent researches and publications**

After opening in the 70s of the last century, the period of competence of staff David Clarence McClelland, Richard Boyatzis, Lyle Spencer and Signs Spencer had created a lot of scientific approaches concerning development, use and analysis of competency models. One of the last researchers can distinguish V. Leonov and O. Kolosov, which described the universality of competencies within the organization, depicted the technology development competencies of each position in interrelation with the vision, mission and values of the company, is schematically displayed using the job profile the competence to improve military-industrial complex. L. Gogina sees the essence of competence approach in the civil service of Ukraine relevant scientific and practical problem. T. Vetoshkyna characterizes the competence approach as the basis of personnel management in the organization and provides taxonomy of recommendations for its use. M. Mazorchuk, V. Dobryak, N. Bakumenko to construct a mathematical model for the selection of staff took as the basis for the competence approach. Use it as a base of research and work with personnel who plan or carry out activities on the international

market, as well as those that introduce innovations are still isolated insufficiently studied and requires further consideration.

*The aim of the article is* systematization of the components forming suitability for employment by the example of some of the key disciplines of modernity, contribute to the development and diversification of the enterprise and combining them into one holistic model of competence: Manager of foreign economic activity (MFEA) and Manager of innovation activity (MIA); justification feasibility introduction evaluation of employees based on competency model in the enterprise.

### The main part

Workforce competencies represent the characteristics of workers, which include professional knowledge, skills, characteristics and abilities, motives, values, and personality: initiative, emotionality, inclination to teamwork, learning ability, determine the behavior of the employee, productivity of labour, the success of the employee in achieving their educational goals and career growth.

A competency model is the axis around which you can and need to build a personnel management system of the company. Current models of competencies set the coordinate system to identify not only the most professionally competent employees, but employees who can be most effective within a specific organizational culture [2].

The main difficulty of modeling is to identify the competencies that ensure the success of a particular enterprise taking into account features of its strategy, the degree of manifestation professional conduct of the employee and allow us to quantitatively evaluate competencies of staff by matching the most desirable to the employer samples of professional conduct of the staff with those that are real will be demonstrated by the employee [6].

Therefore, in the formation of competence models, it is necessary to consider certain recommendations, characteristics and features of competencies:

- the optimal number of competencies in the model should not exceed 10-12 competencies [3], not to create more confusion in their assessment at the division of competencies from one another because the differences from individual competencies elusive small;
- when developing models focused on the selection of the most important competences, which usually are grouped in clusters or functional blocks;
- a competency model consists of clusters or sets of competencies, each of which from 3 to 5 competencies a common feature;
- each competence is provided a specific name, create a competency profile: a description that conveys the content, behavioral indicator, describes its manifestation in human behavior, the ability of the reaction in accordance with the requests and the evaluation scale that allows you to create a uniform system for the evaluation of competences;

- competence assessment helps to create a portrait of the "ideal employee" in identifying high results in all indicators;
- competencies are divided into corporate (key) that is often inherent in all positions in one organization, management expertise used in the evaluation of managers of different levels, special, applying only to certain posts and personal with over-professional nature and are universal for any sphere of activity (spiritual maturity, ability to mutual understanding with colleagues, the presence of targets, etc.) [3];
- divided into simple (a list of indicators of conduct, which can be designed, for example, the head of the company) and detailed (consist of several levels, were most often developed by leading experts, who are knowledgeable in the analyzed field)[3];
- the skills system can be built in two ways: adaptation of existing models to the corresponding positions of the enterprise or create their own list of indicators of conduct internal experts or hired consultants, depending on availability of funds and groups of relevant experts and the specific work of the organization;
- distinguish "soft" and "hard" competences. Hard competences refer to the vocational-specific characteristics (such as professional knowledge and skills), while the soft – personality traits, values and styles of behavior [4];
- competence-based approach is particularly useful for the learning task, because the list of required competencies is not only a method of analysis and description of a profile of the specialist, but the immediate purpose and content of the educational process [2].

Depict the design process and work competency model by using the scheme (Fig. 1). Phases I-III can be called the preparatory and analytical which is a revision of the strategy and goals of the company and the transfer of their impact on the skills requirements of staff, IV can be called the implementation stage of developments: the creation of an integrated system of competencies and evaluation of personnel of relevant categories for them, test, and evaluation. The last two, V and VI stages – stages in which are formed the significant findings carried out analytical and research work on strategy of personnel development, identify areas and forms of development (for example, the choice of training to increase knowledge in new technology, enhancing the creativity of employees, implementing quarterly assessment of staff regarding changes in legislation with regard to international contracts, customs brokerage clearance).

It should be noted that the development of competence models is implemented as a list of competencies and the provision of appropriate levels of various competencies in the model, namely the use of levels as weights, which is multiplied by the result for a specific unit, if it is a paragraph, this may be the maximum allowable value. That is, the level of

competence is the degree of importance of a specific competence compared to other for a certain category of works or a particular specialty.

The process of competence formation MFEA and MIA consists of three phases – development, evaluation using the competency model and the use of evaluation results. The competence model should describe the desired behavior (standards action)

MFEA and MIA, that is such behavior that will ensure the success of innovative enterprises in international relations. Thus, the model normalizes the requirements regarding the actions of the employees in those activities, which are essential for the formation of the value of the services (goods) which the company provides consumers and ways to deliver them to consumers [5].

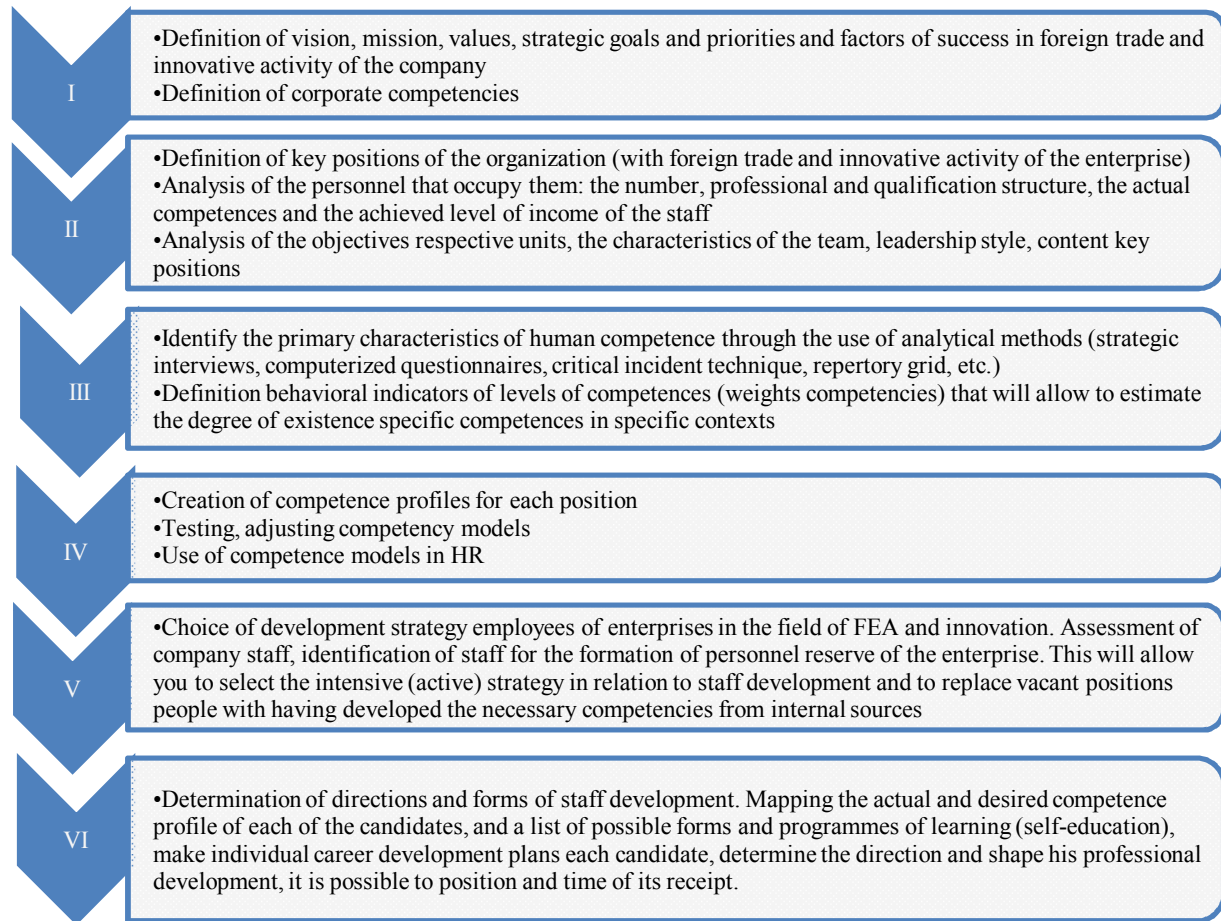


Fig. 1. Scheme of the design process and work competency model  
(Source: compiled by the author based on the study [3,5])

Using the above suggestions to build a system of competency assessment you can create a schematic model that will satisfy the generally accepted requirements of innovation-active industrial enterprises operates at the international level (Fig. 2).

The main types of assessment in competency model for a typical industrial plant can be divided into 2 units (Table 1).

In accordance with the nature of the specialty set specific requirements for the evaluation of each of the blocks, because each post must develop individual criteria, taking into account the need for expertise in each segment.

Table 1. An example of evaluating MFEA and MIA

The estimation object		The essence of assessment
I	Competence	evaluation of knowledge for these blocks: – occupational safety; – professional knowledge; – corporate standards; – electrical safety.
II	Qualifying work	assessment of the level personal competences MFEA and MIA

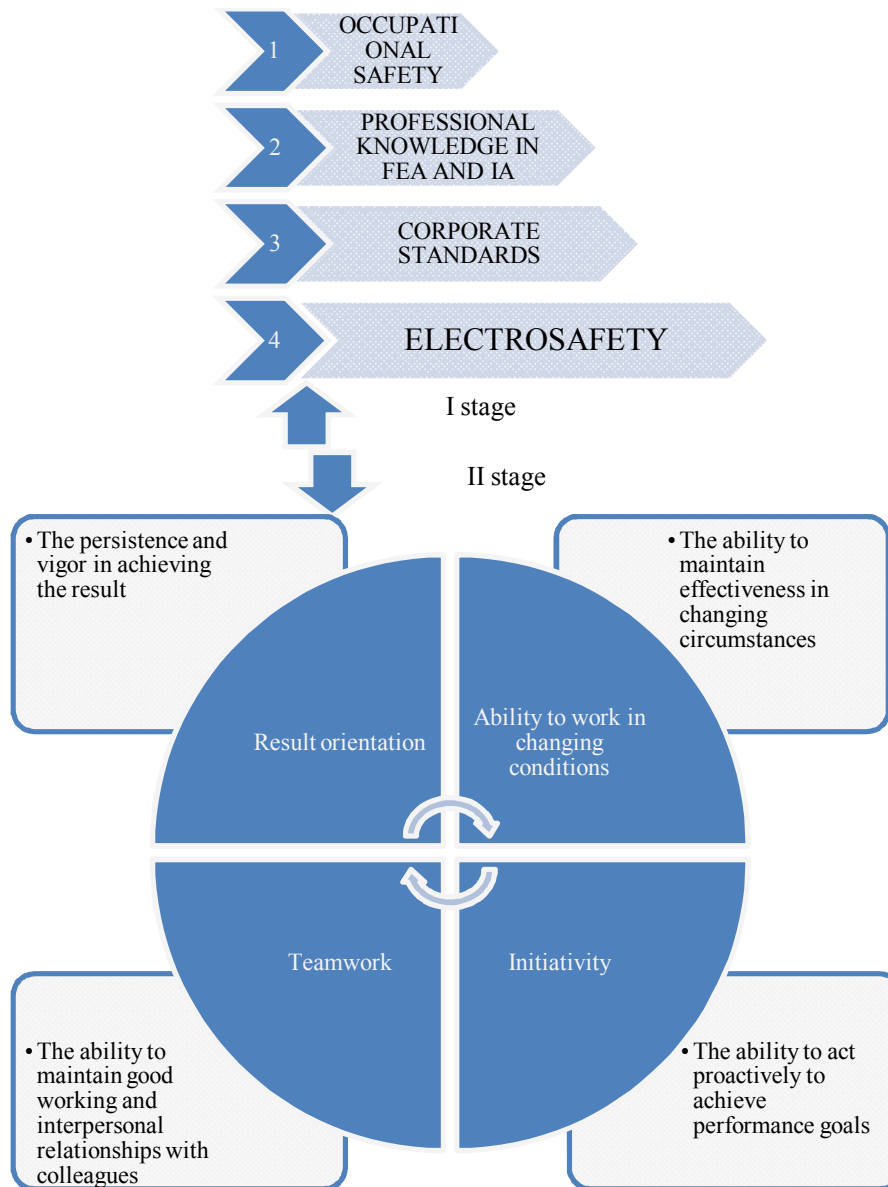


Fig. 2. Model of evaluation competencies employees departments FEA and IA (Source: Own elaboration)

During the consideration of the created competency model appropriate would be the concretization one of the parts of the first stage is professional competence in the management of innovative and foreign economic activity. Professional competence must first meet the requirements of the enterprise and the labour market in general, i.e. the list of competencies on labor market research, covers the greater part of the competences valued by employers when hiring.

In this case we can observe clearly show the relationship of professional competencies in the field of management, from which we can conclude about the need for universal general and specific expertise for the relevant positions (table 2).

If the drafting table is expedient to rate the competence of the expert by for example the formation of the standard of the employee for the company, greater clarity in understanding the competencies MFEA and IA. That is, each

competency is assigned a particular level of proficiency (grade of competence), which also varies regarding the needs of the labor market to work as a specialist of the corresponding sphere.

Analysis of the ranking of competences can be represented using Fig.3, which shows the dependence of the grade of competence from a professional orientation, as well as the need for general and professional knowledge.

Based on the above chart-map of professional competencies of the employee ideal for organization of conditional can be clearly seen and visually depict the distribution of competences of managers of foreign economic and innovative activity of certain types [3]. In this example, it is possible to trace the relationship of both professional and other competencies for both specialties. For greater clarity, to make the diagram was used increased the number of competencies and for an actual model, the list must be reduced.

Table 2. Professional competence MFEA and MIA (Source: Own elaboration)

№	Description of competence	MFEA	MIA
1	Knowledge and skills in management practice	7	7
2	Have a basic knowledge of Economics or technical (according to sphere of activity of the enterprise)	10	10
3	Fluency in English (often in German, Chinese or Japanese) languages	6	2
4	Knowledge of Ukrainian legislation	10	10
5	Knowledge of the legislation of the countries with which the enterprise cooperates and international law related to international relations of different types and operational documentation	10	8
6	The ability of documentation, such as foreign trade contracts, licenses, permits, delivery schedules, product specifications	10	2
7	Knowledge in the field of brokerage operations the ability of the customs clearance of goods or cargo	10	1
8	Knowledge of accounting and IC, the skills in the reporting of the company	5	2
9	Search skills information on the market condition, sales and purchasing	10	9
10	Skills of conducting business negotiations, business correspondence	10	6
11	Identifying the needs of consumers abroad	10	10
12	Gathering information about competitors and counterparties relationships in the international market	10	8
13	Skills to expand our markets	10	
14	Knowledge of the main types of advertising, the psychology and principles of sales	9	5
15	Control of export-import operations	10	
16	Experience in conducting or participating in international fairs, exhibitions	4	4
17	The ability to correct the reporting of the new product (lowering the threshold of disbelief)	10	6
18	The ability to establish the relationship between innovative products and the necessary equipment, the required volumes and production capacity of enterprises	7	10
19	Skills implement creative designs	2	10
20	Skill implementation and realization innovative projects		10
21	Technical knowledge knowledge of innovation, innovation management	1	10
22	The skills of market research, identifying emerging market needs – the ability to evaluate new ideas	6	9
23	Ability to objectively evaluate new projects staff on the new products	5	8
24	Monitoring and timely improvement of the technological processes	3	7
25	Conducting plans and programs of innovative activity		10
26	Experience in preparation of business plans and proof of the investment attractiveness of projects to investors	3	3
27	Knowledge of financial resources (venture capital and innovation funds)	6	3
28	Knowledge of the methods and processes of carrying out protection of new technologies and technological processes	1	8

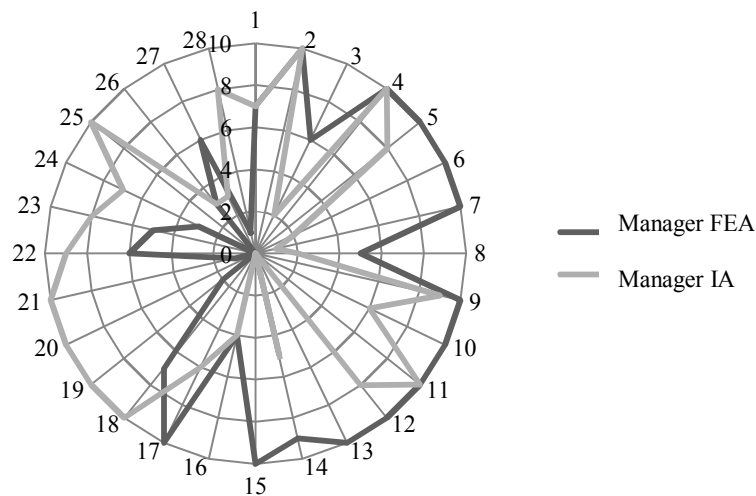


Fig. 3. Chart professional competence MFEA and MIA (Source: Own elaboration)



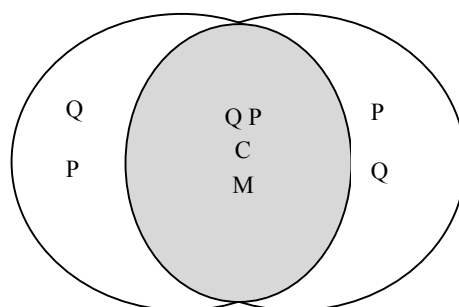


Fig. 4. Schematic of the relationship competences MFEA and MIA (Source: Own elaboration)

In figure 4 the total area at the intersection of the sets up corporate competence (C), concerning missions and values, management competencies (M), what are the basis for developing a model of competencies for managers of departments of foreign economic and innovative activity, as for personal qualities (Q), they can be attributed both to general and to great, because these competencies have individual character. Most often common to the majors but are the specifics of each relevant type of work: for MFEA and MIA an important competence is the ability to work in a team, but when the innovators have much more freedom in creating new ideas and in the process of development, because even in spite of technical education, they are creative. That is, the presence of competence may be required in both cases, but the requirements for grade to vary. Special (professional – P) competence usually wears the specificity of the profession, but for managers as managers, there may be joint, even with the same required rank (for example. №1, 2, 4, 11, 26 table 2.).

So, the questions for the assessment of professional competencies developed for a specific position, in this case specialists FEA and IA, and test key knowledge and skills. Created questions directly from the chief to evaluate members of their unit, external experts and relevant specialists from other organizations.

Of course for aspiring professionals professional requirements is not so much as listed above, but the

salary of a specialist in direct proportion depends on the availability of relevant competences to work on a certain position. Among personal competencies, the following are the specifics for these professions. Depicted in the model to specify the professional requirements can also be added: communication skills, ability to convince, thirst for achievement, a confidence in themselves and their capabilities, analysis of risk and reasonable risk-taking, ingenuity, perseverance and endurance.

After evaluation of competency to identify the level of competency the employee has.

### Conclusions

The study describes the main features of competence and competency models, the application of which it is important to realize when building a competency model. It is also important to establish a clear mechanism to design and work competency model to avoid losing important data informative. Identified core competencies for managers of innovative and foreign economic activity, according to a study of the labor market, was formed a list of core professional competencies that are necessary to "adopt" future professionals and improve their knowledge, skills and abilities to be marketable and in demand on the labor market, contribute to the progress or create innovation-active enterprises will be able to act not only on domestic but also in international level.

### References:

1. Arapova O.M., Fridrif V.P., Modyrka V.A. Competence-based approach as a factor in increasing the competitiveness of the enterprise [*Electronic resource*] / O.M. Arapova, V.P. Fridrif, V.A. Modyrka // *Економіка: реалії часу*. Науковий журнал. – 2013. – №1 (6). – P. 207-211. – Access mode: <http://economics.opu.ua/files/archive/2013/No1/207-211.pdf>.
2. Leonova O.V. Competency Approach as a Means of Human Resources Management of Military-Industrial Complex Enterprise / O.V. Leonova, O.V. Kolosova // *Transactions TSTU*. – 2010. – T 16. № 4. – 994 p.
3. Vetoshkina T. Role of competencies in personnel management / T. Vetoshkina // *Kadrovik. Human resource management*. – 2008. – № 3. – P. 11-18.
4. Mazorchuk N.C. Construction of the mathematical model the selection of personnel on the basis of competence approach/ N.C. Mazorchuk, V.C. Farmer, N.C. Bakumenko // *radio electronic and computer systems*. – 2012. – № 2 (54). – 164 p.

5. Stolarska K.M. Development of human resources of enterprises of postal connection with the formation of competencies [*Electronic resource*] / K.M. Stolarska. – Access mode: <http://nauka.kushnir.mk.ua/?p=39863>.
6. Modeling competences of personnel as a way to assess its competitiveness [*Electronic resource*] – Access mode: <http://diplomukr.com.ua/news/2012/11/16/4564>.

Надано до редакції 06.11.2015

Арапова Олена Миколаївна / Olena M. Ararova  
*Troyana2000@mail.ru*

***Посилання на статтю / Reference a Journal Article:***

*Creating a competency model for the assessment of experts on foreign trade and innovation [Електронний ресурс] / О. М. Арапова // Економіка: реалії часу. Науковий журнал. – 2015. – № 6 (22). – С. 17-23. – Режим доступу до журн.: <http://economics.opu.ua/files/archive/2015/n6.html>*