

then join all factors into summative size, which integrates set of partial criteria. An integrated criterion is calculated in accordance with following formula:

$$R = \sum_{i=1}^n \omega_i \cdot R_i \quad (1)$$

here: ω_i – weight of partial criteria, R_i – normalized values of partial criteria.

Since different factors have uneven influence on research objective, substantial step is to assess factor weight when using multiple criteria assessment methods. Methods of criteria weight assessment could be divided into objective and subjective. When subjective method of criteria weight assessment method is used, criteria weights are defined by experts, when objective methods are used weights are defined in accordance with objective information source for example mathematical calculations and etc. (Podvezko 2008). When determining criteria weights according to the scale of measurement of criteria weights, scales of measurement with various intervals (for example [0, 1], [0, 100] and etc.), grades, points, percentage are used. Most commonly used is criteria weight scale ranging [0, 1] (Ginevičius and Podvezko 2005). As a conclusion when summarizing results of scientific studies conducted on research subject could be stated that human resource competency is sophisticated and complex phenomenon which is affected of many interconnected factors. Under analysis of scientific literature 98 factors having influence on human resource competency were identified. List of initial assessment criteria was delivered for experts for evaluation. Complex multiple criteria assessment method is a suitable tool for assessing human resources competence factors because these factors cannot be expressed in one unified value. The one is not bound to one type of criteria when applying multiple criteria assessment and this gives opportunity to determine each factor significance to the final result, compare values of partial criteria one with another.

3. Identification of competence assessment factors for Professional military service soldiers in Lithuanian armed forces

Today formalized personnel competency assessment interview, where participates both assessor and evaluative (-s) is growing in popularity. This tool of competency evaluation gives possibility for assessor and evaluative to discuss results reached and defi-

ciencies identified during evaluation period. Assessment interview is a part of targeted approach for the personnel assessment which marks the end of one and beginning for another evaluation period. This practice also is applied when assessing professional military service members in Lithuanian armed forces (Lithuanian Ministry of Defense regulations 2012). Under the current arrangements, which came into force from 1st January 2013 (Lithuanian Ministry of Defense regulations 2012) competency (personal qualities and duty task evaluation) of professional military service soldiers is assessed by their immediate superiors. Competency assessment in Lithuanian armed forces has a tendency to be subjective, because professional military service competency assessment is performed by single person (immediate superior) only, when modern organizations of nowadays in order to minimize risk of subjectivity are trying to use at least 3-5 evaluators. Following personal qualities are assessed in latest edition of professional military service competence evaluation arrangement which came into force in the beginning of 2013: patriotism, bravery, self-denial, honesty, devotion, respect, honor, integrity. These personal qualities are assessed on YES/NO basis in other words assessor determines if evaluated person possesses the personal quality or not. Furthermore assessment of personal qualities does not influence final score of whole evaluation. The third part of above mentioned document gives possibility for assessor to judge following aspects of professional military service member: employment of profession related knowledge and skills, management capabilities, ability to cooperate and work in team, operational efficiency, initiative and self-sustainability, stress management, leadership, responsibility and reliability, ability to make decisions, communication and discretion, ability to self – expression orally and in writing form, physical fitness. Physical fitness is one of ten factors assessed which possesses different evaluation range and has no influence on final evaluation score. Latest edition of professional military service competency evaluation if compared with its predecessor (Lithuanian Ministry of Defense regulations 2004) is supplemented with assessment of personal qualities and thorough description of assessment factors. The latest part is usable for evaluator, because it describes content of assessment factors and introduces unified standards for professional military service competency assessment.

Analysis of currently valid professional military

service competency assessment system in Lithuanian armed forces made it possible to frame essential areas of development:

- validity and relevance of assessment factors for nowadays organization and its separate units;
- assessment objectivity, because whole competency evaluation appeals to opinion of only one evaluator;
- evaluators readiness for competency assessment process, since there is lack of knowledge about peculiarities of competency evaluation process among leading personnel;
- different evaluation ranges of competency assessment factors (for example personal qualities are judged on YES/NO basis; physical fitness is judged “passed”, “not passed”, “not carried out”).

In summary could be stated that competency assessment of professional military service members in Lithuanian armed forces is lacking complexity and objectivity (because evaluation is performed by one assessor only). In order to avoid all above mentioned problematic areas competency assessment model of professional military service members in Lithuanian armed forces have been created using multiple criteria assessment method, which incorporated expert and quantitative evaluation methods. Research was conducted in order to identify factors influencing human recourse competency assessment. List of initial competency assessment criteria have been created by analyzing internal and external document sources:

- *external sources*: scientific literature, legal documents of foreign countries, documents describing professional military service competency assessment and assessment certificates of US, Canada, Sweden, experience of professional military service competency evaluation in foreign countries;
- *internal sources*: Lithuanian legal documents, regulations of Lithuanian armed forces, competency evaluation certificates of professional military service in Lithuanian armed forces (Lithuanian Ministry of Defense regulations 2012 order V-1039, Lithuanian armed forces regulations 2012 order V-479, Lithuanian Ministry of Defense regulations 2004), experience of competency evaluation in Lithuanian armed forces.

List of initial competency assessment criteria for professional military service in Lithuanian armed forces consisted of 98 factors. Authors found and eliminated from the list 42 initial competency assessment fac-

tors that were similar one to another by its content. After the removal of similar items, list of initial competency assessment criteria consisted of 56 factors, which were divided into four groups according to its content (Table 1):

- *personal* (24 factors): views, personal values, motivation, self-arrangement, personal qualities (Adamonienė and Ruibytė 2010);
- *moral* (11 factors): willingness to stand for ones believes, behave in the accordance to values declared even when it can lead to unfavorable consequences, persistence and ability to act understanding all consequences in situation filled with indeterminacy (Doctrine for the armed forces of United states 2009);
- *management* (16 factors): capabilities related to leadership in profession area or organization, effective way of distributing tasks and teamwork (Butkevičienė and Vaidelytė 2009);
- *profession related* (5 factors): operational field specific capabilities, skills and experience based knowledge which allows for one to fulfill tasks assigned in perfect manner (Kalesnykas and Dieninis 2012).

It was arranged structured survey for experts in order to qualify list of initial competency assessment factors (56 factors). Experts could express their opinions about each competency assessment factor using modified *Likert scale* (strongly favorable, favorable, unfavorable and strongly unfavorable). Experts in this survey were high ranking officers having not lower but majors military rank, because their experience in armed forces were greater than 10 years. According to Lithuanian president decree (Lithuanian president 2012) which determines the highest numbers of personnel in Lithuanian armed forces for five years to come (year 2012-2017) general population of this study consisted of 496 Lithuanian high ranking officers (major and above). Respondent sample were made of 81 military experts, having not lower than major military rank.

particular knowledge, skills, experiences and moral values in order to perform efficiently in multicultural environment. R. Boyatzis (1982) is dividing competencies into basic (fundamental) and professional. Basic competencies could be best described as individuals' inborn skills to perform particular actions meeting minimum requirements. Meanwhile professional competencies diverge from above mentioned only in quality of results reached. Professional competencies are developed to meet higher standards and enables individual to perform faster and gain competitive advantage. R. Boyatzis distinguishes four groups of basic (fundamental) competencies that every individual possesses: intellectual, motivational, emotional, and social. According to the author difference is only in the development level of these competencies (Boyatzis 1982). R. Jacobs (1989) propose to divide human resource competencies into "hard" and "soft". According to above mentioned author, analytical and organizational competencies are classified as "hard", meanwhile creativity, communicational skills – as "soft", last – mentioned have huge influence on behavior of individual and are easier to measure in comparison with "hard" ones. However both "soft" and "hard" competencies of human resources are equally important for outstanding performance (Jacobs 1989). There could be encountered hierarchical classification of management competencies in scientific literature. Essence of management hierarchical competency classification is a pyramid of management specialist. Every step of management career is defined by particular set of tasks that should be performed when working in certain position. Successful performance can be guaranteed with a possession of different combinations of competence (Saquib and Malik 2012).

Many Lithuanian and foreign scientists have conducted researches related to management (leadership, leaders) competency. More comprehensive studies concerning competency subject have been performed by scientist R. E. Boyatzis (1982). Many research papers on this topic highlight that management (leadership, leaders) competency is multiple and integrated concept related to effectiveness at both individual and organizational levels. Actuality of management competency research is mostly determined by globalization and transformation processes, technological and social changes influencing needs of society, structures and forms of business and public administration organizations. Leaders role

and his/her competency composition are at the state of constant change because of the following reasons: equal importance is usually set on both efficiency and social responsibility of decision outcomes, taking into account interests of society and long term welfare. When making decisions leader should take into account and understand importance of systematic transformation changes and their controlling means of in undefined conditions. It means leader should be able to figure out how his decision could influence changes in organization and its close vicinity. Leaders competencies are immediately related with concept of efficiency looking from individual and organizational perspectives: beginning with individual leaders level and successful his/her career planning process, further strategic organizational level when competencies needed for mastering changes in uncertain conditions, solving problems in the complex manner and making both efficient and socially responsible decisions. Efficacious mastership of management competencies enables leader to act more precisely in dynamic environment, spot effective tools for mastering development of organizations creative potential (Raudeliūnienė *et al.* 2012). Competency of human resources is classified as sophisticated and complex social phenomenon, because it is influenced by many interconnected factors that are used to work in opposite directions. According to V. Podvezko sophisticated values could be evaluated by using complex multiple criteria assessment methods. Multiple criteria assessment methods enable quantitative appreciation of every sophisticated phenomenon that is expressed by many different indexes (Podvezko 2008). R. Ginevičius points out that evaluation process of sophisticated and complex phenomenon is usually made pursuing following multiple criteria assessment stages: formulation of research problem, objective and goals; composition of list of factors influencing research objective; establishment of factor quantification for research objective; formalization of factors for research objective, establishment of significances and its normalization; selection of model for defining factor weights and definition of factor weights; selection of method for joining research objective factors into one summative size; decision making in order to improve the state of research objective (Ginevičius and Podvezko 2005). According to R. Ginevičius and V. Podvezko (2003) essence of this method is to set partial indicators of research objective, compute their values and weights

COMPETENCY ASSESSMENT OF PROFESSIONAL MILITARY SERVICE IN LITHUANIAN ARMED FORCES

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Abstract. Due to a dynamic environment, human resource competency evaluation and factors influencing its outcome are in constant change. Evaluation of human resource competency and factors influencing its quality are widely discussed subjects in scientific literature with ample controversial viewpoints. Various definitions, points of view and models makes it difficult to choose the best option when evaluating human resource competency and may be the source of the following problem: how to know that the chosen competency evaluation method will convey reality and deliver objective results that could be used as a basis for human resource development related decision making in the future. This study analyses different scientific views on the human resource competency evaluation process. The purpose of this study is to develop a conceptual model for competency evaluation of professional military service in the Lithuanian armed forces that would allow for human resource potential evaluation and form a basis in human resource development related decision making processes in organization. Multiple criteria assessment methods were used for identification and evaluation of factors influencing human resource competency. As a result of conducted research, authors developed the conceptual complex model for competency assessment of professional military service in the Lithuanian armed forces, which enables objective identification of human resource competency influencing factors and forms the foundation for decisions related with development of human resources in organization.

Keywords: Competency, armed forces, decision making, multiple criteria assessment.

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JEL Classifications: D8, D83, M12.

1. Introduction

The growth of economic and social welfare of the state is tightly interconnected with capital and natural resources, but only few countries around the globe have that kind of superiority. As an example could be mentioned Russia, Middle East countries and USA. These countries have abilities to form their future because of resources owned. Lack of resources and increasing demands for social and economic progress in Western European states amplify the impor-

tance of human resources as assurance for continued growth of states' welfare. Constant transformations tend to amplify the meaning of human resource management in public administration and business sectors. Effective management of human resources is frequently seen as an efficient means to improve performance. Development of competitive abilities that cannot be quickly and easily imitated guarantees high market value. In order to ensure market success the organization must effectively manage human capital. Outstanding performers (organizations) must

Table 1. Competency assessment factors for human resources

Competency	Assessment criteria (author, year)
Personal	Performance (United States Marine Corps regulations 2000, order p1610), personal qualities (Ansari and Khadler 2011), situation assessment (Lenburg and Abdur-Rahman 2003), proficiency (Swedish armed forces regulations 2012), integrity (Lithuanian armed forces regulations 2012, order V-479), knowledge (Tian and Miao 2009), potential (Duncan <i>et al.</i> 2010), commitment (Duncan <i>et al.</i> 2010), sense of duty (Department of army 2007), efficiency (Swedish armed forces regulations 2011), self-knowledge (Savanevičienė <i>et al.</i> 2008), emotional stability (Tian and Miao 2009), obstinacy (Thomas and Panchal 2010), strength (decision) (Tian and Miao 2009), questioning (Dyer <i>et al.</i> 2011), observation (Dyer <i>et al.</i> 2011), recognition (Ansari and Khadler 2011), stress management (United States Marine Corps regulations 2000, order p1610), adaptation (Helyer 2011), flexibility of mind (Tucker and Pleban 2010), autonomy (Burns and Costley 2002), potency to learn (Helyer 2011), social perception (Tian and Miao 2009), spontaneity (Muhlbacher <i>et al.</i> 2011).
Moral	Patriotism (Lithuanian armed forces regulations 2012, order V-479), devotion (Lithuanian armed forces regulations 2012, order V-479), self-denial (Lithuanian armed forces regulations 2012, order V-479), honesty (Lithuanian armed forces regulations 2012, order V-479), bravery (Lithuanian armed forces regulations 2012, order V-479), loyalty (Department of army 2007), respect (Lithuanian armed forces regulations 2012, order V-479), honor (Lithuanian armed forces regulations 2012, order V-479), responsibility (Lithuanian armed forces regulations 2012, order V-479), setting an example (United States Marine Corps regulations 2000, order p1610), influencing others (Tian and Miao 2009).
Management	Analytical thinking (Thomas and panchal 2010), networking (Dyer <i>et al.</i> 2011), experimenting (Dyer <i>et al.</i> 2011), creativity (Botha 2010), critical thinking (Lenburg and Abdur-Rahman 2003), decision making (United States Marine Corps regulations 2000, order p1610), motivation (Swedish armed forces regulations 2011), planning (Botha 2010), initiative (United States Marine Corps regulations 2000, order p1610), leadership (Lenburg and Abdur-Rahman 2003), control (Ansari and Khadler 2011), team work (Duncan <i>et al.</i> 2010), developing subordinates (United States Marine Corps regulations 2000, order p1610), working with people (Botha 2010), communication (United States Marine Corps regulations 2000, order p1610), knowing foreign languages (Muhlbacher <i>et al.</i> 2011).
Profession related	Professional military education (United States Marine Corps regulations 2000, order p1610), military attitude (Tian and Miao 2009), modern military skills (Swedish armed forces regulations 2011), physical fitness (Tian and Miao 2009), integration of knowledge (Lenburg and Abdur-Rahman 2003).

International expert survey was organized in such manner that every expert received e-mail letter with a link to electronic survey tool (which was translated into Lithuanian, English, and Swedish). More than 300 recipients who met above described criteria received electronic letters. Totally 103 experts from four different countries participated in this survey: Lithuania (71), USA/Canada (23), and Sweden (9). Survey was conducted in September – December 2012. This above mentioned survey was aimed to qualify list of initial competency assessment criteria for professional military service in Lithuanian armed forces. Mean values and rating distribution of initial competency assessment factors were counted in order to fine the list. Mean values of personal competency factor survey results were computed in order to clarify which of personal competency factors was most significant (1 – highest value, 4 – lowest value). According to experts most significant personal competency assessment factors are: flexibility of mind, performance, knowledge, proficiency, situation assessment. While least significant are: spontaneity, obstinacy and questioning. Respondents rated

proficiency as the most important and second most important competency assessment factor (Table 2). According to the experts most significant moral competency evaluation factors are: responsibility, honesty, respect, setting example, and honor. While least significant are: patriotism, bravery, self - denial.

Table 2. Importance and ratings of personal competencies

Importance of personal competencies	Rating of personal competencies	
Flexibility of mind (1,31)	1 place	Proficiency (28 %)
Performance (1,31)	2 place	Proficiency (16 %)
Knowledge (1,31)	3 place	Sense of duty (10 %)
Proficiency (1,32)	4 place	Flexibility of mind (9 %)
Situation assessment (1,39)	5 place	Emotional stability (11 %)

Source: the authors

Respondents rated honesty as the most important and second most important competency assessment factor (Table 3).

Table 3. Importance and ratings of moral competencies

Importance of moral competencies	Rating of moral competencies	
Responsibility (1,16)	1 place	Honesty (28 %)
Honesty (1,23)	2 place	Honesty (21 %)
Respect (1,43)	3 place	Responsibility (18 %)
Setting an example (1,44)	4 place	Responsibility (19 %)
Honor (1,51)	5 place	Influencing others (17 %)

Source: the authors

According to the experts most significant management competency evaluation factors are: decision making, leadership, teamwork, planning, and initiative. While least significant are: knowing foreign languages, networking, experimenting. Respondents rated analytical thinking as the most important and decision making second most important competency assessment factor (Table 4).

Table 4. Importancies and ratings of management competencies

Importance of management competencies	Rating of management competencies	
Decision making (1,21)	1 place	Analytical thinking (29 %)
Leadership (1,23)	2 place	Decision making (17 %)
Teamwork (1,34)	3 place	Decision making (15 %)
Planning (1,34)	4 place	Planning (14 %)
Initiative (1,35)	5 place	Creativity (11 %)

Source: the authors

According to the experts the most significant profession related competency evaluation factor is: professional military education (1,32). While least significant is: physical fitness. Respondents were asked to rate actuality of each competence group (personal, moral, management, profession-related) for professional military service separately. According to the experts most significant competency group for professional military service profession-related (1,23), less importance have (in descending order) management (1,35), personal (1,38), moral (1,43). After analysis of expert survey data was completed 24 competency assessment factors were chosen to the newly qualified competency assessment factor list, which later with expert advice was complemented with two more factors suggested during the survey. Final competency assessment factor list consisted of 26 factors: personal

–7, moral –7, management –7, profession related –5 (Table 5). In the next stage of this study, expert group of high ranking officers in Lithuanian Air Force Air Space Surveillance Command (further LAF ASSC) was composed, which consisted of 10 experts. In February – March 2013 LAF ASSC experts were asked to determine importance of initial and partially integrated competency assessment factors. Groups of profession – related (0,33), management (0,27), personal (0,215) competencies were determined as the most important for LAF ASSC personnel. While least important for LAF ASSC personnel was moral (0,185) competence group. Most important competency assessment factors in personal competency group were proficiency (0,206), knowledge (0,156), and emotional stability (0,154). Setting example (0,183) and responsibility (0,182) were evaluated best in moral competency group. Most important competency assessment factors in management competency group were analytical thinking (1,82), planning (0,161). Professional military education (0,320) and knowledge integrity (0,245) were highlighted in profession related competency group (Table 5).

Table 5. Weight of professional military service competency assessment factors in LAF ASSC

Weight of partial integrated evaluation criteria	Weight of initial assessment criteria
Personal (0,215)	Sense of duty (0,146)
	Proficiency (0,206)
	Flexibility of mind (0,114)
	Emotional stability (0,154)
	Situation assessment (0,114)
	Knowledge (0,156)
	Empathy (0,110)
Moral (0,185)	Honesty (0,160)
	Responsibility (0,182)
	Respect (0,125)
	Honor (0,166)
	Influencing others (0,104)
	Setting an example (0,183)
	Tolerance (0,080)
Management (0,27)	Decision making (0,159)
	Planning (0,161)
	Leadership (0,122)
	Team work (0,136)
	Analytical thinking (0,182)
	Initiative (0,140)
	Creativity (0,1)
Profession related (0,33)	Professional military education (0,320)
	Integration of knowledge (0,245)
	Military attitude (0,140)
	Modern military skills (0,160)
	Physical fitness (0,135)

Source: the authors

Assumptions of professional military service competency assessment model were prepared in accordance with competency assessment experience of foreign countries, international expert survey and suggestions from LAF ASSC experts.

4. Concept complex competency assessment model of professional military service in Lithuanian armed forces

Data collected from international and domestic studies made it possible to create concept complex competency assessment model of professional military service members in Lithuanian armed forces (Fig.1). Following stages are essence of newly created concept model:

- analysis of internal and external sources in order to identify factors influencing competency assessment of human resources;
- list of initial assessment criteria for professional military service in Lithuanian armed forces is based on data collected from above mentioned sources;

- creation and qualification of initial competency assessment list for professional military service in Lithuanian armed forces;
- evaluation of competency assessment criteria values for professional military service in Lithuanian armed forces;
- evaluation of competency assessment criteria weights for professional military service in Lithuanian armed forces;
- calculation of competency assessment integrated criteria estimates for professional military service in Lithuanian armed forces;
- formation of competence improvement solution sets for professional military service in Lithuanian armed forces;
- evaluation and selection of decisions related to competence improvement solution sets for professional military service in Lithuanian armed forces;
- implementation of competency improvement related decisions for professional military service in Lithuanian armed forces.

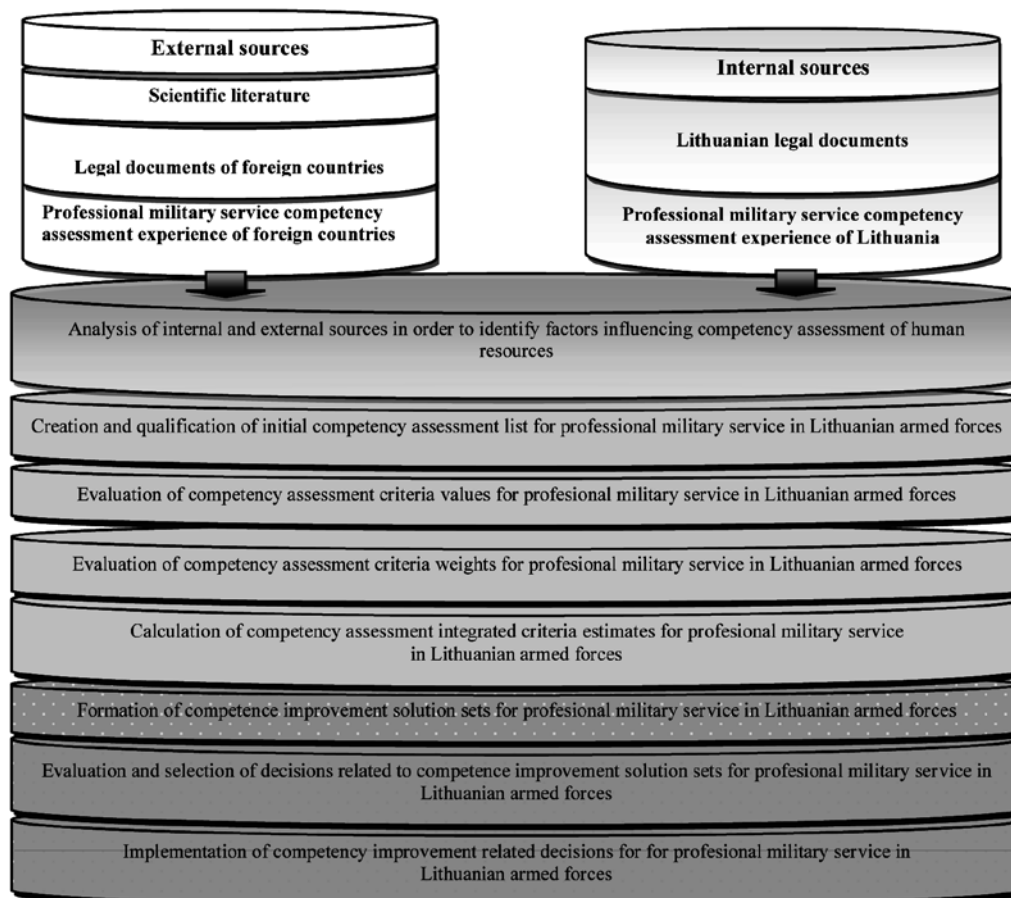


Fig.1. Concept complex competency assessment model of professional military service soldiers in Lithuanian armed forces

Source: the authors

Suggested concept complex competency evaluation model for professional military service in Lithuanian armed forces employs more objective and accurate evaluation process and makes it possible not only comprehensively assess factors influencing competency but even determine weak and strong points of ones competency. Data accumulated by this competency assessment model allows easy formation of competency improvement sets for professional military service in Lithuanian armed forces.

Conclusions

Competency is composed of knowledge in combination with human capabilities and it is perceived as completeness of particular knowledge, capabilities and skills. Definition of competency was objective of their research for many scientists, though complexity and sophistication of this phenomenon made it difficult to reach unified opinion when defining the subject. Scientists working with factors influencing human resource competency construe them differently and pays little or no attention at all to assessment of competency factors. Today many organizations are experiencing same problem and can't define which method of competency assessment is capable to create results that are easy to understand for decision making chain and exactly points out problematic competency areas of assessed ones. Multiple criteria assessment method complemented with expert assessment was chosen in this study to solve problem. Initial competency assessment criteria list for professional military service in Lithuanian armed forces was composed of 98 factors. Initial competency assessment factors that were similar by their meaning (42 factors) were eliminated from the list. After removal of similar factors list consisted of 56 factors, which later was divided into four competency groups according to their content: personal, moral, management, profession related. Structured expert survey was made in order to qualify list of initial competency assessment criteria (56 factors). Requirements for experts were: not lower than majors military rank and greater than 10 years experience in the military branch. One hundred and three (103) military experts from USA, Canada, Sweden and Lithuanian armed forces participated in international expert survey. Analysis of data collected from international experts showed that most significant personal competency factors were: flexibility of mind, performance, knowledge, proficiency, situation assessment. Most significant moral competency factors were:

responsibility, honesty, respect, setting the example, honor. Decision making, leadership, teamwork, planning, initiative were named as most significant management competencies. Professional military education was assigned as most significant factor in profession related competency group. Qualified competency list consisted of 26 factors of which personal (7), moral (7), management (7), profession related (5). There were created group of LAF ASSC experts consisting of 10 high ranking officers in the next study stage. Experts were asked to determine weights of partially integrated and initial assessment criteria. Most important competency group for LAF ASSC experts was profession related competencies, less important management and personal competency group. According to LAF ASSC experts least important competency group was moral. As a result of accomplished study concept complex competency assessment model was prepared for professional military service in Lithuanian armed forces. This model can be used in all units of Lithuanian armed forces, public administration organizations or private companies in order to assess human resource competence in objective manner and later form competency improvement solution sets based on data collected during assessments.

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