

# PROJECT MANAGEMENT COMPETENCE IN THE DEVELOPMENT OF ECONOMY AND CIVIL AND DEFENCE SECTORS

*Rada Lečić, Goran Radovanović, Vesna Buha, Miroslav Bjegović*  
Ministry of Defence of the Republic of Serbia,  
Project management college

The composition of the project management paper is based on several key issues. The emphasis is placed on the features that provide a general level of knowledge of project management competences in formulating the strategy of project objectives, the knowledge of corporate tools in assessing effective investment, the creation of an optimal capital structure of the project, as well as in creating the project benefits in the social environment, military organization systems, community, group etc. Effective project management is a source of positive social impact, with the potential to assist in lifting people out of poverty and efficient functioning of the system as a whole. It is often a powerful way to achieve innovation of products and services, business models and management of processes and various types of military operations. Therefore, it is important to mobilize the investment assets of businesses and knowledge through more efficient cooperation with organizations and institutions within the economy, society and the military. The process of Serbia's convergence towards "common European homeland" is an imperative and therefore education and competencies should have an important place in the promotion of the specific field of project manager competencies as well as command structures at various levels.

*Key words: acquisition of competencies, project manager, socio-economic development, globalization, legal institutions, military operations*

## Introductory Considerations

The subject of the paper covers several key issues related to education and acquisition of competencies in a democratic society, with a focus on the specific field of the project manager competence. New events and findings require adjustment of our socio-economic system to contemporary approaches to macroeconomics and key trends in Europe, including the defense system. That is why certain researches have been translated into this work, in order to more explicitly point to the required level of methodological knowledge in solving the project task of evaluating the efficiency of investment and implementation of the realized goals.

In order to objectively verify the indicators of efficiency, it was necessary to distinguish the items of commercial profitability and effectiveness not adequate for social

profitability.<sup>1</sup> Such model meets the requirements of foreign investment projects evaluations. However, the overall aim of this paper is to highlight the importance of private capital in the development and transformation of society to a more humane place for the poor and for more efficient functioning of the military under the contemporary economic trends. The growing global markets raise the question of how to involve a great number of people with entrepreneurial skills in the process of eradicating poverty and how to enable efficient functioning of the military under such conditions.

The starting point is in profitable businesses – carefully selected projects, and very often, when it comes to the military, duties to be performed. The most enduring contribution of such projects is to uphold human dignity through the eradication of poverty. It becomes clear that the corporations and entrepreneurs jointly benefit from the social system transformed in such way. The role of the private capital in financing any projects, including military operations, is essential in promoting democracy and support to civil society, as well as understanding of organizational and business processes in a company. The entrepreneurial role in the competence acquisition is *socially determined* (the need for achievement, need for power and need to belong) and determined by certain knowledge and skills managed by entrepreneurs and various command levels of in the military ("mastery" of a specific job or task, development of problem solving skills, tendency towards innovation).

In social sense, entrepreneurs seek a continuous strengthening of specific behavior, that is, the needs of entrepreneurs in terms of interaction, feedback and continuous affiliation. In terms of specific competencies, they seek continuous action that relates to continuous needs for professionalism.<sup>2</sup> The process of acquiring knowledge and skills is a lifelong one and implies careful planning, organization, investment and application in concrete tasks. In that sense, detailed information on educational programs, professional orientation, as well as intensified work on the acquisition of competencies are necessary. It is a long process that requires time and investment in formal and non-formal education. The need for more direct connection between competencies and business objectives in terms of profiling, results in a more efficient economy and application of the acquired knowledge, as well as efficient performance of various types of military operations directly related to the development and education of society as a whole. Enhancement of competences, and knowledge as a shared asset, are certain characteristics of the contemporary and / or digital business and functioning of the military as well as the defense system. The national economy has been transforming in the accordance with the laws of economy (knowledge-based economy).

The growth of the knowledge-based economy is the result of investments in intangible assets, patents, licenses, intellectual property and research activities.<sup>3</sup> The need for investment in lifelong learning is confirmed by researches on the educational needs of selected employers in Serbia through primary data collection from the field. Continuous improvement of the quality of work, lifelong learning, investing in skills and adapting to the contemporary operating environment, benefit both the individual and the entire society. Involved corporations and the military are socially more responsible in selecting proper projects with manifold benefits for the organization and the environment. All these issues are sublimed in *the hypothesis that the*

---

<sup>1</sup> "Development of Project Preparation Capacity for Environmental Investments", Anex 3. Task: Project for financial and economic analysis; Methodology for cash flow forecast: Incremental analysis and Project financial viability.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

*economic development is the transformation of social values and functioning of the defense system.* The adopted assumption is the starting point in the coverage of this topic. The structure of the paper consists of theoretical observations assuming the theses on the development as social transformation. This is the basis of the issue of competences for democratic culture focusing on project managers in terms of their professional qualifications against the EU requirements and immediate implications for the Serbian Armed Forces. Deduction leads to the core of this paper - the role of the project manager in the formulation of a funding strategy, the outcome of which is the path to profitable business and achieving the defined objective.

## Development as Transformation of the Society and Defense System (Systems of Military Organizations)

During the long history of political theory, the civil society (*koinonia policy, societas civilis, societe civile, Bürgerlichen gesellschaft, società civile*) and the state (*polis, civitas, etat, staat, stato*) were intertwined and interchangeable terms. The term "civil society" comes from ancient Greece, and it was introduced into public use and the European political thought in the eighteenth century. The theory of civil society was reestablished during the twentieth century through the paradigm of "civil society – state of law" – the rule of law and government control mechanism. Civil society, as a concept in modern theory, is interpreted from two perspectives: economic activity and political importance.

According to Orlovic, S.<sup>4</sup> civil society is defined as an aggregate concept, which implies a specific set of social communication, social relationships and social institutions and values with the following main actors: the citizen, with their civil rights; civil society organizations, associations, movements and institutions as well as everything in modern society covered by the term „the public“. It is believed that the modern civil society is a complex model established in relation to the essential segments of social life (economic, cultural and political), sublimed in the system – the state. The state, as an economic - political community and one of the pillars of the economic system, invests resources in order to achieve general interests of society. This includes the strengthening of the defense system, as an important element in maintaining peace. On this basis, Figure 1 shows the tri-sector division of society

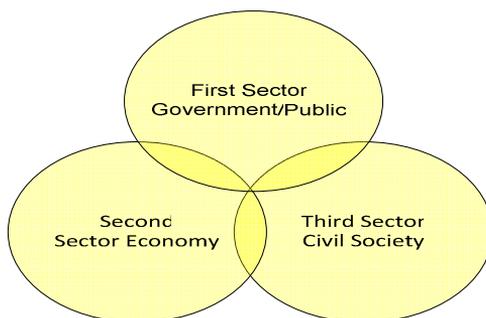


Figure 1 – Tri-sector division of society

<sup>4</sup> Orlovic S., *Demokratska civilnost*, Univerzitet u Beogradu, Fakultet političkih nauka, godišnjak 2007, p. 464 – 469.

The civil society, including the defense system,<sup>5</sup> affirms a number of strategic areas of development<sup>6</sup>, through cash flow used for projects:

1. *Excellence in Science* – funding of most interesting scientific researches;
2. *Industrial Leadership* – support to innovative small and medium enterprises;
3. *Social Challenges* – support to medical research, food industry, transport, energetic etc.

For the analysis and diagnosis of the economy, *Global Competitiveness Index*<sup>7</sup> is a "tool" in the hands of the management. Competitiveness is essential for enhancing management efficiency, and it is divided into three separate economy management groups shown in Figure 2.

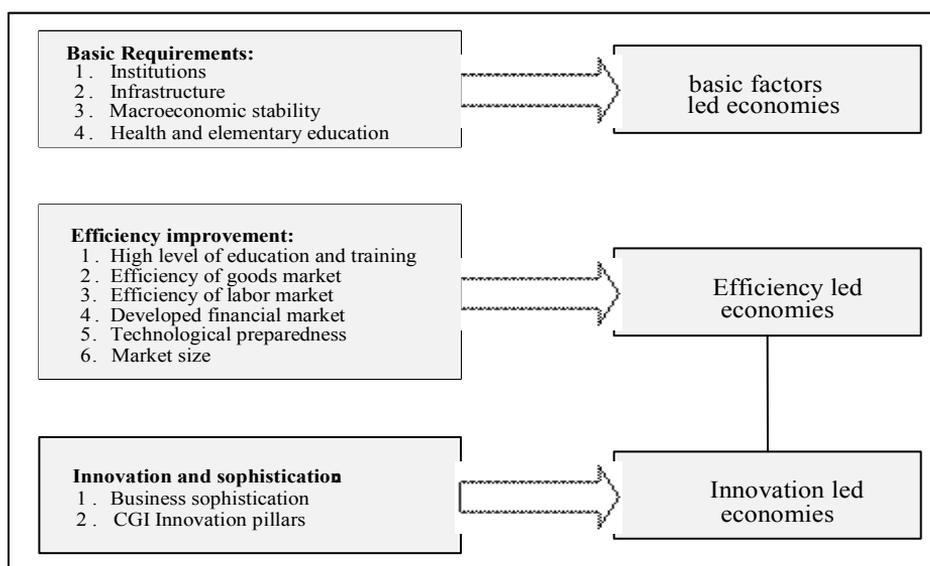


Figure 2 – Competitiveness pillars in three groups<sup>8</sup>

In competition, the management ability is a sine qua non in the creation of products innovation, processes and marketing methods at all levels of economy (public, business and civil sector). Specific expectations pertain to the role of the civil society in the field of innovations, which are the key to business success and survival of any society of capital

<sup>5</sup> Direct inflow of finances through projects increases spending in civil society and employs local resources. According to the Organization for Economic Cooperation and Development – OECD, it is estimated that in 2011 approximately 19,3 billion dollars was directed as development assistance through civil society organizations.

<sup>6</sup> <https://ec.europa.eu/programmes/horizon2020/> The EU Framework Programme for Research and Innovation/

<sup>7</sup> <https://www.weforum.org/>

<sup>8</sup> Ibid.

and efficient functioning of the defense system. The civil sector has a special place in the field of education, especially non-formal education, in support to innovative processes.

Without a quality higher education and training of employees, an economy cannot offer complex products and services, which is also true when it comes to the military and the defense system. Competition in the global markets requires training for new technical and technological challenges. Globalization substantially strengthens links between countries through technology and financial flows (export of products and capital). Technological development becomes the core interest of all countries of the world. Under such altered circumstances, the ideological-political and military complex assumes a new dimension.

Less developed countries can improve their competitiveness through the development of institutions, establishing macroeconomic stability, as well as improving the human capital. Thus, the role of the civil sector in the economic development and the defense system functioning is indisputable, as evidenced by rich societies in which the civil sector has a long tradition and successful functioning of security and defense.

## Competencies for Democratic Culture

In pursuit of improving the competencies, it is necessary to bear in mind three thematic priorities listed in the European Employment Strategy 2020<sup>9</sup> - smart, sustainable and inclusive growth. From the perspective of the individual, improved competencies lead to individual, professional growth and development. Collectively, *smart growth* is exactly what makes these steps, through the promotion of knowledge and innovation. In this, it is realistic to expect an increase in the level of human resources efficiency, compliance with environmental principles, stronger competitiveness, increased quality, which all points to *sustainability*. Cultivating the *involvement* of the individual at all times, (which points both to the digital aspect and the society as a whole), social and territorial cohesion and employment growth can be achieved.

The system set in this way points to the fact that the goals of individuals, organizations and companies are not antagonistic. On the contrary, they are specifically directed towards the development, growth, improvement and cohesion. It is necessary to view the process of competency acquisition and improvement as a lifelong and continuous one, bearing in mind that they are acquired as formal, non-formal, and informal. The complexity of the acquisition and improvement of competencies finally leads to a national model of qualifications, which is integrated into the European Qualifications Framework - EQF.<sup>10</sup>

Qualification, certification, diplomas accompanying the formal education and training are of great importance for individuals, citizens. The objective of the EQF is to accurately describe the competencies so that they can be mapped and integrated from the national level to the European Union level, particularly bearing in mind the aspect of the military that needs to be interoperable in performing various types of operations. In this regard, the focus is on learning outcomes, following the knowledge acquisition (theoretical and

---

<sup>9</sup> <http://ec.europa.eu/social/main.jsp?langId=en&catId=101><http://ec.europa.eu/social/main.jsp?catId=101&langId=en>

<sup>10</sup> <http://www.accreditedqualifications.org.uk/european-qualifications-framework-efq.html>

factual) and skills (cognitive – logical, analytical, intuitive and creative thinking, and practical skills). Competencies in the EQF context are described in terms of responsibility and autonomy. Visual representation of the structure of competences in a democratic society is shown in Figure 3.

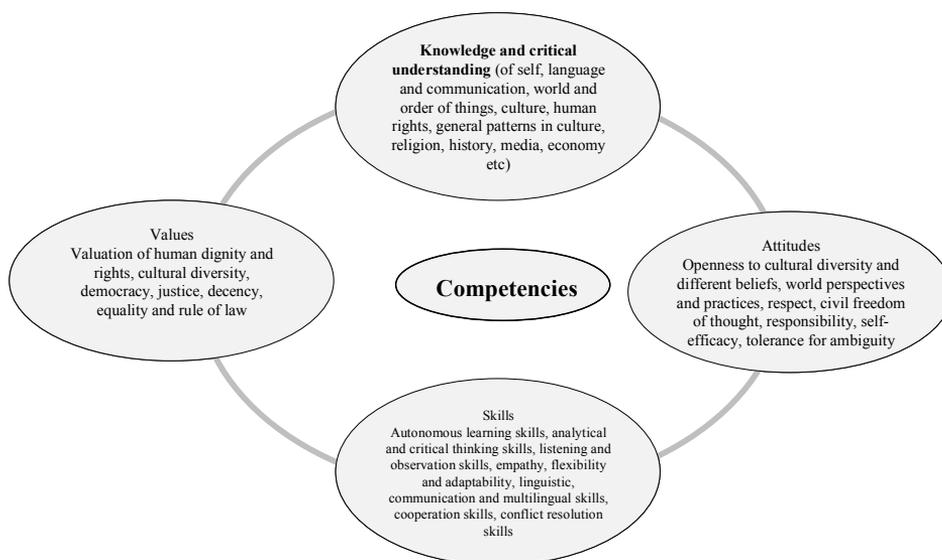


Figure 3 – Competencies for democratic society<sup>11</sup>

**Knowledge and critical understanding** (of self, language and communication, world and order of things, culture, human rights, general patterns in culture, religion, history, media, economy etc.)

Skills are defined as the capacity to perform complex, well-organized milieus based on opinions or behavior, while applying various adaptable ways that would enable reaching specific goals.

Knowledge and critical understanding point to the availability of relevant information, its understanding and application in appropriate contexts. From the aspect of democratic culture, it refers to the need for understanding and exchange of critical information and arguments in an intercultural environment.

Petar Jovanović<sup>12</sup> believes that a modern manager must possess *functional knowledge* - related to planning, organizing, human resources, management and control; *system knowledge* - to analyze, manage a business as a set of parts functioning together in achieving the planned objectives; *knowledge of the situation analysis* – using functional and system knowledge to analyze the specific situation and resolve individual managerial problem.

<sup>11</sup> Fenz A., *ECQA Certified EU Project Manager – Skill Card*, Erasmus + 2014. p. 7-11.

<sup>12</sup> Jovanović P., *Menadžment, Teorija i praksa YUPMA*, Beograd, 2010. p. 234.

As pointed out by Samed Karović<sup>13</sup> for the issues related to military organization systems, particularly in terms of the significance of defense and defense affairs, it can be concluded that despite the fact that there are practical solutions in the field of operation management, there is no complete and comprehensive built system of universal and comprehensive operation at all levels of command, that is, process activities related to the commands. This is due to objective circumstances arising from the need of restructuring military organizations system and the fact the process is still ongoing. The essence of all processes is indeed in their permanent dynamics and changes, thus the military organization and management are also subject to certain processes and changes arising directly from the dynamics of changes in the military organization system. This is also the case for commands that specifically perform all the processes of project management in the field of defense and military operations.

In their considerations on the democratic society, European institutions<sup>14</sup> consider attitude and values in addition to knowledge and skills. Values are defined as beliefs that individuals adhere to and try to observe and most often display a certain consistency about them in the unit of time. The fact is that values encourage motivation and have a certain normative character. In the spirit of democracy, values are important as the impetus to exercise authority not only relying on the information, factual or political components, but also by strengthening the aspects of interaction, negotiation, respect for individuals, diversity, human rights etc.

Attitudes are determined as the reference to a certain object, person, group, institution and event. They are explained through the components: the opinion and subject of the attitude, the emotions towards it, evaluation and tendency of the individual to act in accordance with their opinion. Nikola Rot points out the dimension of attitudes: *attitude direction* – positive or negative attitude towards the subject of the attitude; *complexity of the attitude* – the amount and type of information, emotions and *tendencies towards action* included in the attitude; *extremity* or degree of adherence to an attitude, *compatibility* - when components of an attitude have the same valence, *consistency* - application in all cases where it is applicable, *the power of attitude* and *openness* or intensity of an attitude.<sup>15</sup>

Analysis of competencies is intended for a wide range of users (students, employers, and teachers) to compare qualifications. This is a way to increase mobility in the labor market, both within and between countries, as this facilitates evaluation of the level of qualifications. This enables increasing of balance between the labor supply on the one hand, and the knowledge and skills of the individual, on the other.

The project managers with their set of knowledge and skills acquired after individual learning outcomes in accredited educational institutions enable any activity, project and enterprise, which implies management, planning, organizing, hiring human resources and implementation of control. Their knowledge and skills can be used in projects at local, national and international levels.

---

<sup>13</sup> Karović, S., Župac, G., Ristić, V., Vojni menadžment - naučna disciplina nauka o menadžmentu i biznisu ili nauka odbrane, Vojno delo, 2011, vol. 63, br. 2, Beograd, 2011, p. 251-26.

<sup>14</sup> Fenz A., *ECQA Certified EU Project Manager – Skill Card*, Erasmus, 2014. p. 7-11.

<sup>15</sup> Rot, N. *Osnovi socijalne psihologije*, Zavod za udžbenike i nastavna sredstva, Beograd 1987. p. 300-302.

Considering the objectives and functioning of military organization systems, directly arising from the defined mission and tasks of the Armed Forces as a whole, we enter the domain where the achievement of these goals is accompanied by exchange of energy, matter and information between the system and the environment, which is the subject of the work and functioning of the control elements, that is, the task of the project management. The functioning of the military organization systems, regardless of the type of work or the realization of their objectives, primarily relate to their internal environment, that is, maintenance of their internal relations, and relations with the external environment.<sup>16</sup>

## Project Management – Knowledge-based Competency

Given the complexity of contemporary business activities, it is necessary to consider the skills and knowledge required for a person to be able to perform tasks, projects, ventures competently and well. ECQA<sup>17</sup> has specified the strategy in the form of skill cards prescribed for each profession. It is defined on the basis of modular learning elements with specific outcomes and performance criteria. This set of skills is required for the free movement of employees.

Professional knowledge and skills are described<sup>18</sup> through the specific content, domain, professional role; activities performed at work, learning elements, performance, cognitive level, supported by specific documentation on the acquired competences. The skill card of the European Agency for certification and quality also describes the project manager. Table 1 provides an overview of responses to the question: What should the project manager know?

Table 1 – Project manager knowledge overview

PART I INTRODUCTION INTO EU PROJECTS	
EU Structure and institutions	Introduction into EU Programmes
<p><b>Project manager knows:</b></p> <ul style="list-style-type: none"> <li>• main institutions and bodies of the EU</li> <li>• roles of European Parliament, European Council and Commission</li> <li>• roles of Court of Justice, European Central Bank, Court of Auditors and other bodies.</li> <li>• the source of the EU budget and how it is spent.</li> <li>• financial framework 2014-2020.</li> </ul>	<p><b>Project manager is familiar knows:</b></p> <ul style="list-style-type: none"> <li>• how to assign different project ideas to European funding programmes.</li> <li>• the aims and funding rules for EU research and innovation programmes, such as Horizon 2020.</li> <li>• Erasmus+, the EU programme for education, training, youth and sport..</li> <li>• main principles of the Europe 2020 strategy.</li> </ul>

<sup>16</sup> Karović, S., Župac, G., Ristić, V., Vojni menadžment - naučna disciplina nauka o menadžmentu i biznisu ili nauka odbrane, Vojno delo, 2011, vol. 63, br. 2, Beograd, 2011, p. 251-26.

<sup>17</sup> Ibid.

<sup>18</sup> Fenz A., ECQA Certified EU Project Manager – Skill Card, Erasmus, 2014. p. 7-11.

PART II PROJECT OBJECTIVES AND FINANCE		
<b>Start-up and Objectives</b>	<b>Management of Work Packages and Project Results</b>	
<b>Project manager knows:</b> <ul style="list-style-type: none"> <li>• how to select relevant partners for project consortium.</li> <li>• advantages of knowledge sharing and knows how to integrate the know-how of partners.</li> <li>• how to define measurable project objectives.</li> <li>• how to plan the project results.</li> <li>• how to align project objectives to programme objectives and organizational objectives.</li> </ul>	<b>Project manager is knows:</b> <ul style="list-style-type: none"> <li>• the definition of work packages in EU projects.</li> <li>• how to define inputs and outputs of work packages.</li> <li>• how to accept the responsibilities for work packages.</li> <li>• how to define the process to integrate the project results.</li> <li>• how to develop the project plan and how to set key tasks.</li> </ul>	
<b>Finance Management</b>	<b>Contract Management</b>	
<b>Project manager knows:</b> <ul style="list-style-type: none"> <li>• the project budget structure and types of eligible and non-eligible costs.</li> <li>• how to apply different cost categories in EU-funded projects.</li> <li>• understands payment models between EU Authorities, coordinators and partners.</li> <li>• how to define and manage the project budget and evidences of budget usage..</li> <li>• how to manage budget changes and how to calculate the final EU funding.</li> </ul>	<b>Project manager:</b> <ul style="list-style-type: none"> <li>• understands the content of the contract between EU Authority and the consortium.</li> <li>• understands the purpose and the process of the legal and financial viability checks..</li> <li>• knows how to run contract negotiations with the EU Authorities.</li> <li>• knows how to develop and negotiate contracts with project partners.</li> <li>• knows how to follow-up a contract throughout the project and how to manage amendments.</li> </ul>	
PART III COOPERATION		
<b>Communication and Team Management</b>	<b>Exploitation and Sustainability</b>	<b>Reporting</b>
<b>Project manager:</b> <ul style="list-style-type: none"> <li>• understands communication principles between EU Authorities and consortium.</li> <li>• knows how to establish communication models within the project consortium.</li> <li>• understands importance and principles of document management and IT infrastructure.</li> <li>• knows how to organize and manage project meetings and other communication events.</li> <li>• is aware of cultural differences in international cooperation.</li> </ul>	<b>Project manager:</b> <ul style="list-style-type: none"> <li>• understands the concept and importance of dissemination activities.</li> <li>• defines a dissemination plan and strategy</li> <li>• understands the importance of intellectual property rights.</li> <li>• knows how to identify relevant models for exploitation of project results.</li> <li>• knows how to agree on exploitation and sustainability plan or agreement.</li> </ul>	<b>Project manager:</b> <ul style="list-style-type: none"> <li>• understands the reporting models for specific EU programmes.</li> <li>• knows what information and evidences are needed for financial and content reporting.</li> <li>• knows how to prepare content, status and financial reports to EU.</li> <li>• knows how to establish reporting models within consortium.</li> <li>• knows how to manage communication with EU authorities in relation to reporting.</li> </ul>

<b>PART IV QUALITY MANAGEMENT</b>	
<b>Quality Planning and Control</b>	<b>Risk Management</b>
<p><b>Project manager:</b></p> <ul style="list-style-type: none"> <li>• understands the importance and characteristics of quality in EU projects.</li> <li>• understands the responsibilities of partners in quality management.</li> <li>• knows how to plan quality of processes and results in EU projects.</li> <li>• understands why the quality assurance and control is needed.</li> <li>• knows how to manage internal and external reviews, evaluations and audits of EU projects.</li> </ul>	<p><b>Project manager:</b></p> <ul style="list-style-type: none"> <li>• understands the most relevant risks in EU projects.</li> <li>• understands what risk management is and how it is applied in European Projects.</li> <li>• understands the responsibilities for risk management and how to respond to different risks.</li> <li>• knows to apply risk management activities and tools.</li> <li>• knows how to define the different types of conflicts and how to manage them.</li> </ul>

In order to meet the requirements defined by *the Skill Card*, a project manager must be familiar with the issues of financial management, contracts, communication skills and team management for the purpose of exploitation and sustainability of the project. A project manager also must be familiar with the standards of reporting, quality management and project risks. These are very rigorous requirements and define a project manager in the wider context as one of the initial factors of social transformation manifested through various dimensions of the project. This is also a question that permeates all elements of operations, as projects implemented by the military. Essentially, the aforementioned properties of project management directly affect the characteristics of successful command and control.

The modern concept assumes that the project must be environmentally sustainable in order to be socially acceptable. From an economic point of view, the project should improve the profitability of a company and contribute to the socio-economic development. In addition, a project concept is preferably based on ethical values and future voluntary actions. If military operations are observed as projects, they essentially match the aforementioned characteristics, and the government stands behind them.

Thus, the benefits of competent project management, including commands at various levels of military organization systems, are manifold, not only for the participants in the project, but also beyond, for the community as a whole. The role of the project manager is particularly important in creating a favorable climate for investment in large and risky projects that give impetus to the development of the entire economy with positive implications for improving the quality of life, that is, living standards and the achievement of specific objectives through the implementation of the project.

## Role of Project Management in Formulation of Investment Strategy

Formulating investment strategy is the responsibility of project management, and in the defense system and the Serbian Armed Forces it is the responsibility of commands at various levels. This is the process of identifying the general guidelines for the growth

and development of enterprises through capital investments and successful performance of various missions. Since at this stage of the strategic orientation not all of the potential projects can be identified, the sufficient condition is to identify key success factors of those businesses that offer expected strategic benefits and profits. In formulating effective investment strategies two basic types of strategies are most commonly used:

- *Portfolio Strategy*, which identifies strategic business areas that offer a variety of profitable opportunities and / or require different competitive approaches.
- *Competitive Strategy*, defining the different approaches that the company intends to use when investing in selected strategic business areas.<sup>19</sup>

The process of formulating investment strategy is based on projections of future successful condition, expected growth and profitability in individual strategic business areas (Figure 4). Simultaneous identification of the existing situation and development objectives of the company is carried out. On this basis, the attractiveness of individual strategic business areas, as well as the target strategy is determined.

The evaluation criteria of the strategic business areas are: a) the expected growth rates of return on invested capital (profitability) and b) future successful status of assets (funds invested) and its funding sources. This is the premise on which the assessment of investment opportunities and investment strategy is based, and these are the starting points in a company's action in selected strategic business areas. Assumptions of this kind provide a competitive advantage in target market segments.

Another project management activity is the strategy implementation. The defined implementation strategy represents a platform for decision-making in the investment process. The system of investment decision-making takes place at several levels: (a) project implementation, (b) preliminary project selection, (c) project formulation, and (d) the decision on the project. Figure 4 provides illustration of the described decision making process.

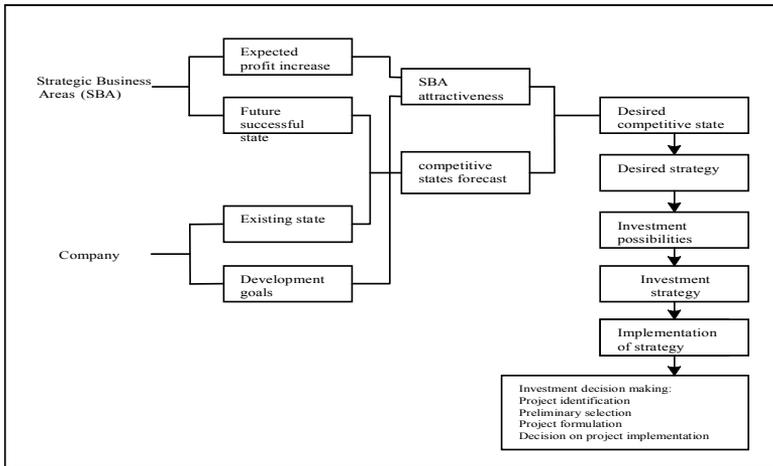


Figure 4 – Formulating investment strategy<sup>20</sup>

<sup>19</sup> In the case of military organization systems we talk about operations performed within a specific mission and it depends on the defined goal.

The area of capital budgeting provides enough space for overcoming problems related to project risk in management options based on selected strategic business areas. In formulating the investment strategy, project managers have the appropriate tools in project management, such as the portfolio strategy. The portfolio strategy provides the managers with realistic options in the field of project evaluation, in relation to their share in the overall risk of the company, and thus in all phases of military operations.

## Private Capital as the Key Element of Development

The system and the funding mechanism of economic growth is the foundation of any economy and development policy. Modern economies are more or less open to the world market. Complementarity and interdependence are increasing. The economy openness imposes the need of mastering the nature of financial relationships on a global level. Accordingly, it is necessary to understand the division of the project financing models. There are four main cases of project financing categorized in accordance with specific characteristics inherent in each model. All the models comply with the definition of capital calculation required for assessing the eligibility of projects. These four main cases are:

1. No domestic alternative: 100% foreign funding
2. No domestic alternative: partial funding from domestic sources
3. Alternative – domestic investment: 100% foreign funding
4. Alternative - domestic investment: partial funding from domestic sources.

The presented models of project financing have a certain degree of financial flexibility. One of the important issues of corporate finance is the extent to which a company's choice of capital structure determines its value. The concept of the project financing is linked to the choice of capital structure, which undoubtedly affects the value of the company capital. This question, given its importance, disciplines project managers of the company. They have to develop the efficiency of the project to the extent that allows creation of the cash flow (internally generated funds) required for its sustainability, as well as to fund other projects, bypassing the rules of the capital market. Military organization systems present a specific case that can be perceived as combination of the aforementioned cases. In that, it should be stressed that the decisions on funding certain military complexes – the defense industry, are based on certain economic – political interests. The political aspect of funding implies a political authorization for spending and it is an expression of informal relations between the military and the defense industry, which supplies the military.

Alternative models of financing (equity financing) relate to financing through equity and essentially mean a process of raising capital by selling stocks or shares of a company to investors, in order to position the company for further growth and development. It is important to distinguish the activities because of the know-how and management skills that cannot be undertaken in the absence of private foreign investors and the investors who are available for domestic alternatives. Often, know-how and

---

<sup>20</sup> Lečić R., *Osnove finansija*, VŠPM, Beograd, 2009, p.134.

management skills have to be bought, which is not always possible. It should be noted that domestic alternatives to a project significantly influence the assessment of private foreign investments. In this case, one must distinguish between the evaluation of the project and evaluation of the way the project is financed. The described models of financing (equity based models - seed, startup, business angel, venture capital and private equity), which are based on ownership of capital, have not been developed and legally recognized in many countries. In addition, the efforts to establish those regulations and mechanisms are not visible enough.

However, it is necessary to add another form of foreign investment to the model of funding a specific project, which, as a rule, covers all phases: design, implementation, exploitation for contracted period and its transfer to the ownership of the other contracting party (the investor). This joint venture of the financial institution (bank) and the investor (sponsor) is known as *project financing*. This method of funding the project came about as a result of the global crisis of the banking sector. Therefore, project financing, as off-balance-sheet financing, that is, funding the project as *an independent economic entity* (legal entity), is considered to be a modern banking product. From a legal standpoint, in project financing both parties can be private law entities, in contrast to concessions, where one party is always a public legal entity.

Investment decisions should be based on appropriate methods of project evaluation, in order to select a project that shows the best referential values of the effective use of invested funds. The instrument of policy of investing in projects is *the capital investment plan* (CIP). It is an integral part of the assessment methodology under which the real value of an asset (or company) equals the value of expected discounted future net cash income. The goal of CIP is to select the project with the highest expected discounted future net cash income. Of course, in the case of military operations some alternatives that will ensure reaching the goal will be considered.

*Discounted cash flow* (DCF), as well as a kind of analysis is any method of evaluation and selection of investment projects which adjusts cash flows to the time value of money. Operational procedures for evaluation of the project may vary, but assessment methodology for all financing projects is the same. Methodology to achieve full coverage of the financial and economic analysis is based on the cash flow forecast. One may conclude that foreign aid as a means of financing investment activities is superior to other financing models. Appropriate level at which this question is raised is the macro-economic level rather than the project level.

The financial and economic analysis model includes an evaluation of commercial and social efficiency of the project. Therefore, the evaluation of the project is structured as:

- Evaluation of the financial efficiency of the project,
- Evaluating the economic efficiency of the project.

Financial and economic analysis verifies the parameters for the calculation of social cost – benefit analysis (reflecting the economic policy of the country in which the investment is made) and the commercial cost – benefit analysis (acceptance criteria of companies whose basic aim is maximization of profit). Accordingly, an overview of the basic parameters for the analysis of discounted cash flows of the project is presented in Table 2.

Table 2 – Overview of basic parameters of project discounted cash flows analysis

Evaluation elements / Parameters	Financial (commercial ) efficiency of the project	Economic (social) efficiency of the project
Project effect evaluation criteria	Project effect on surplus products that remain at the investor's disposal	Project effect on all goals of socio-economic development
Scope of the effect	Immediate project effects.	Direct and indirect project effects
Project effects evaluation costs	project input /output market costs	Corrected project input /output costs
Investment decision-maker time preferences	Individual time preferences of the investor	Social time preferences
Term that expresses project financial and economic analysis	Project profit – if it does not disrupt the investor's liquidity the project can be feasible	Project benefits (measurable and immeasurable )– if it contributes to the goals of national economy , the project can be feasible

Accordingly, an evaluation of project investment efficiency includes:

- a) *Drafting a project investment proposal;*
- b) *Assessment of future cash flows;*
- c) *Selection of the project from the standpoint of maximizing the value for the owners of the invested capital, which means that the selected project is the one with the highest quantum of present value (PV).*

Methods for evaluation of the project are:

1. *Pay Back Period (PBP)* – a simple method.
2. *Internal Rate of Return (IRR)* – a complex DCF technique defined as the discount rate that equates PV of future net cash flows of the project with the initial cash expenditure for the project.
3. *Net Present Value (NPV)* – dynamic method – a complex DCF technique that represents the difference between PV of net cash flows from the project and the initial money expenditure for the project.

The criterion often applied to private enterprise is the return period of the invested capital. In its simplest version, this criterion is assessed based on the number of years required to recover the initial investment. The decision rule is to choose potential projects with the shortest payback periods among all projects. Under certain circumstances, this decision rule can provide accurate answers. In general, although it gives a rough indication of the project liquidity, the criterion is a weak measure of profitability because:

1. *It ignores cash flows that occur after the expiry of the payback period,*
2. *Does not take into account the time value of money and*
3. *Has a rough acceptance criteria, i.e. subjectively determined point of rejection.*

However, a problem can arise when ranking projects based on IRR and NPV method. Important question: what can lead to conflict in the ranking? *When two or more projects mutually exclusive, so that only one can be chosen, ranking the projects based*

on the method of IRR and NPV may give conflicting results. The conflict in the ranking is the result of three project differences:

- (1) The scope of investment;
- (2) The form of cash flow;
- (3) The life of a project.

*Proposal: ranking by NPV can lead to the correct choice; by applying the NPV, the project expected to have the largest increase in company value will be chosen.*

$$\text{NPV formula is: } NPV = \sum \frac{C_i}{(1+r)^i}$$

where

NPV = present value of future net cash flows

C<sub>i</sub> = net cash flow (+ or -) in the period *t*

r = discount rate or capital cost

i = economic life of the project

IRR function is based on the *net present value* function of the project. It can be considered a special case of NPV, where the calculated rate of return is the interest rate that corresponds to 0 (zero) of the net present value.

NPV (IRR (values), values) = 0

When all negative flows appear successively earlier than all positive cash flows, or when a series of cash flows of a given project contains only one negative cash flow, the IRR function returns a single value. Most capital investment projects begin with large negative cash flow (initial investment) followed by a series of positive cash flows and therefore they have the same IRR value. However, sometimes there are several acceptable IRR values, and sometimes there is none.

The investment project is a controlled process of problem identification, strengths or guidelines, which defines the objectives, describes the current situation and successful outcomes, and evaluates the extent of costs and benefits associated with a certain way of solving a problem. Description of the financial and economic indicators for evaluating the investment efficiency is shown in Table 3.

Table 3 – Description of the financial and economic indicators for evaluating the efficiency of investment

Incremental analysis	Integrated analysis	Socio-economic analysis/
<p><b>1. Procedures</b></p> <ul style="list-style-type: none"> <li>▪ Projecting cash flow</li> <li>▪ Only financial strength of the project is evaluated</li> <li>▪ Evaluation of the project financial efficiency</li> </ul>	<p><b>1. Procedures</b></p> <ul style="list-style-type: none"> <li>▪ Projecting cash flow for assessing the profitability of the investor's own funds</li> <li>▪ Evaluation of the project, i.e. its reproductive effect on the financial power of the investor</li> </ul>	<p><b>1. Procedures</b></p> <ul style="list-style-type: none"> <li>▪ Projecting cash flow (cash flow modified by inflow of other profits)</li> <li>▪ Assessment of the project economic efficiency, which indicates contribution to the national economy</li> <li>▪ Cost - benefit analysis is an instrument of shaping and managing national economic policies</li> <li>▪ Project evaluation                             <ul style="list-style-type: none"> <li>- Effect on company,</li> <li>- Effect on society</li> <li>- Project effect on limited project area</li> </ul> </li> </ul>

Incremental analysis	Integrated analysis	Socio-economic analysis/
<p><b>2. Procedures</b></p> <ul style="list-style-type: none"> <li>■ Projecting cash flow (cash flow modified by inflow of other profits)</li> <li>■ Assessment of the project economic efficiency, which indicates contribution to the national economy</li> <li>■ Cost - benefit analysis is an instrument of shaping and managing national economic policies</li> <li>■ Project evaluation                             <ul style="list-style-type: none"> <li>- Effect on company,</li> <li>- Effect on society</li> <li>- Project effect on limited project area</li> </ul> </li> </ul>	<p><b>2. Evaluation of investment efficiency – profitability of the investor’s funds</b></p> <ul style="list-style-type: none"> <li>■ Discounted method is applied</li> </ul> <p>Interpretation of the result using standard profitability indicators – Net present value and Internal rate of return (NPV and IRR)</p>	<p><b>2. Cost –benefit analysis uses three methods of comparison of costs and profits (economic indicators) :</b></p> <ul style="list-style-type: none"> <li>■ NPVB (Present value of net Benefits),</li> <li>■ ERR (Rate of Return)</li> <li>■ BCR (Benefit-Cost Ratio)</li> </ul>
<p><b>3. Investment evaluation criteria</b></p> <ul style="list-style-type: none"> <li>■ NPV:                             <ul style="list-style-type: none"> <li>- Absolute measure of profit, i.e. effect on material strength of the project</li> <li>- project with the best annual balance of net cash is selected</li> <li>- used for comparison of two or more projects or variants of a project</li> <li>- Suitable as a criterion in case of mutually exclusive projects<sup>21</sup></li> </ul> </li> <li>■ IRR :                             <ul style="list-style-type: none"> <li>- Relative measure of the project efficiency</li> <li>- Information on the average rate of cumulative</li> <li>- Provides information on maximum acceptable real interest rate on the total funds</li> <li>- Criteria for ranking projects according to cost-effectiveness</li> <li>- it is often the target rate for the project effectiveness</li> <li>- not applied to ranking of mutually exclusive projects</li> </ul> </li> </ul>	<p><b>3. Evaluation criteria:</b></p> <ul style="list-style-type: none"> <li>■ NPV:                             <ul style="list-style-type: none"> <li>- Measure of the impact on the economic strength of the project</li> <li>- the project with the highest NPV is selected</li> <li>- used for comparison of two or more projects or variants of a project</li> <li>- Suitable as a criterion in case of mutually exclusive projects</li> </ul> </li> <li>■ IRR:                             <ul style="list-style-type: none"> <li>- Indicator of the average annual rate of the investor’s funds accumulation</li> <li>- Criteria for ranking projects according to cost-effectiveness</li> <li>- has the role of the required rate of project effectiveness</li> <li>- Not applicable as a selection criterion for mutually exclusive projects</li> </ul> </li> </ul>	<p><b>3. Cost –benefit analysis uses methods of cost comparison with inflows (economic indicators) :</b></p> <ul style="list-style-type: none"> <li>■ NPVB (Present value of net Benefits),</li> <li>■ ERR (Rate of Return)</li> <li>■ BCR (Benefit-Cost Ratio)</li> </ul> <p><b>4. Decision making rule:</b></p> <ul style="list-style-type: none"> <li>■ Present value of net benefits (NPVB): (NPV): first select the project with the highest NPV, then successively follow the projects in descending order of inflows</li> <li>■ Rate of Return (ERR): select the project with the highest rate of return, then follow projects successively until the rate of return equals the ex ante determined social discount rate;</li> <li>■ Benefit-Cost Ratio (BCR): select project with the highest B / C, and then follow the projects in descending order until the B / C or the budget is exhausted;                             <ul style="list-style-type: none"> <li>– BCR is appropriate when budget is restricted;</li> <li>– BCR focuses on profit per consumed goods.</li> </ul> </li> </ul>

<sup>21</sup> Mutually exclusive projects are alternative project proposals that cannot be implemented at the same time; if one of them is being implemented, the others cannot. Proposals may be mutually exclusive because they require a different start of the same project, because of limited available funds or due to the fact that if one is being implemented, the others are not necessary.

The described basics of the discounted cash flow analysis are inevitable in selecting a good project. It is imperative to analyze the profitability of the proposed project prior to its implementation. It is important to point out that investing in projects should be carried out on the basis of surveyed economic factors, in order to select the most suitable project for investment, taking into account all other goals that can be achieved. This is also a requirement in the execution of military operations as a key element of their implementation. The general position is that both private and foreign investors are looking for quality projects for investing their capital, taking into account the administrative compliance, eligibility of the potential investor, the evaluation of project quality and financial evaluation of the project.

## Civil Society Institutions and Politics as a Condition for Foreign Investment

In considering the relationship between democracy and civil society, the democratic potential of civil society should be taken into account. The concept of civil society has always had a strong democratic impulse. Among the democratic functions of a civil society, the building of a democratic political culture is the one that stands out. By affirming the democratic values, a civil society creates conditions for the democratic functioning of the government institutions. Today, various policies are failing to improve the social and economic status of a large number of citizens. On the contrary, they can lead to poverty and social exclusion because they define the objectives and means of shaping society in a way that leaves out certain groups in our society. The following key aspects of policies influencing the development are recognized:

- *Availability of finance and access to capital*; aimed at creating a new generation of entrepreneurs and businesses.

- *Relationship of the education system and entrepreneurship*; training of young generation for critical thinking, identifying and creating new economic value.

- *Development of entrepreneurial culture*; government support and partnership in promoting and stimulating entrepreneurial culture that leads to inclusion in economic processes.

Relationship between the access to economic development and social transformation becomes apparent and is shown in Figure 5.<sup>22</sup>

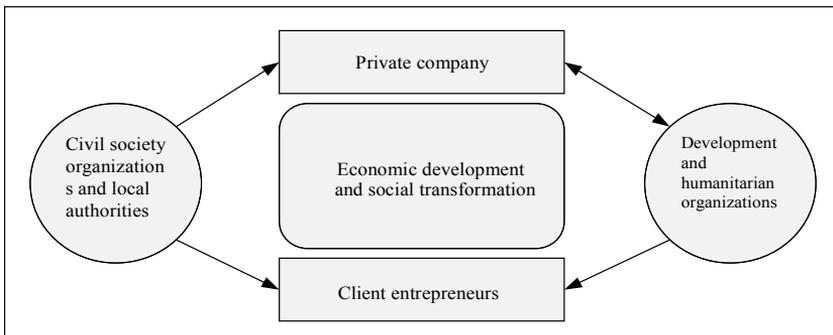


Figure 5 – Relationship between economic development and social transformation

<sup>22</sup> Prahalad, C.K., *The fortune at the bottom of the pyramid*, Pearson Education Inc. Publishing as Wharton Scool Publishing, 2005, p.2.

One of the dimensions of eligibility and the criteria of concrete implementation of the model of private financiers is the institution of civil society and politics. Institutions may lead to poverty and social exclusion of individuals and groups due to a selective approach and inefficient functioning. For these reasons, foreign private capital expects clear agreements:

- Can the project be implemented within the legal framework and how the project is resistant to politics?
- Can the government, private sector and other partners obtain all necessary approvals and are the approvals applicable?
- Is the communication structure adequate?
- Can investors count on reliable government and civil center – service when investing in digital technology?<sup>23</sup>

Figure 6 shows the transformation of institutional capacities in the spirit of democratic tradition.<sup>24</sup>

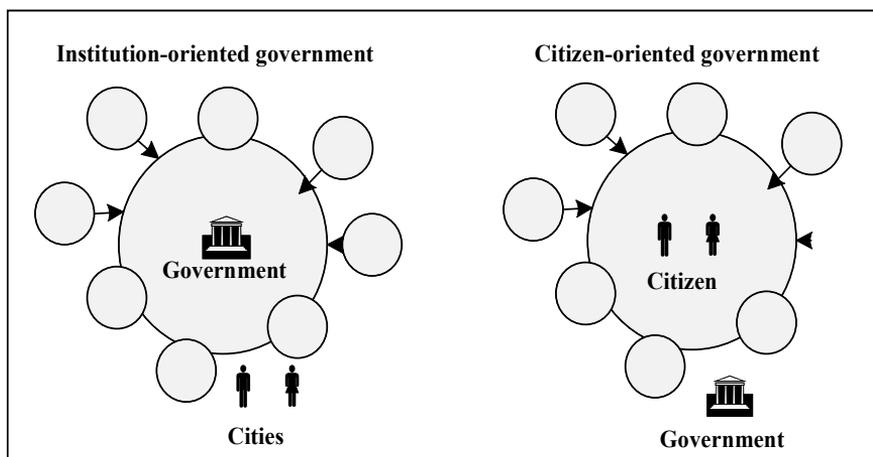


Figure 6 – Transformation of society into citizen-oriented government

Contemporary business is a major challenge. One of the important goals is to reduce corruption in public education by introducing accountability for efficient operation of local governments and other significant actors in the society. The condition for that is building of institutional framework, that is, the development of stable institutions through the following domains:

- *Social* (human resource development, health, education, social cohesion)
- *Economic* (competitive market economy and balanced economic growth based on knowledge, development of infrastructure and
- *Environmental protection*.

<sup>23</sup> Ibid., p. 99–112.

<sup>24</sup> Ibid., p. 84.

Creating such environment greatly contributes to the implementation of the project at full capacity, as well as reducing or eliminating risk. Corruption in government, as a political risk, can seriously disrupt the project. Political risks primarily occur due to company externalization or use of foreign jurisdictions and foreign accounts for assets. Also, legal risks (changes in laws that regulate the elements of the agreement and their status) can be a source of negative impact on the financial performance of the project. Thus, through investing in skills, social structures influence the shaping of the economic environment, as well as the focus on investment in certain areas of research and development of human action. Major projects, including the military, require the involvement of the Government - the host country, which is often the guarantor (provides government guarantees to repay the debt in case of political crisis) and implements appropriate legal reforms. Along with this, the society must focus on raising the public awareness and stronger public participation in decision-making.

## Repercussions of the Civil Society Development on Changes of the Military Aspects

The military is a rather closed system and certain processes that occur in the society are actually the last to be implemented in the military. This clearly points out that the processes of development and certain changes in the society are slower in the military. However, if we take into account the economic developments in the country, we have a different situation. Any change in the military requires future leaders capable of carrying out certain transformations. As pointed out by Nedžad Imamovic, " ... limited financial resources are critical for a high level of capabilities, because the military should be transformed into a highly capable and efficient force, so that the one who leads that department should also take the lead in the reform activities."<sup>25</sup>

As pointed out by the same author, "... leadership in the military should especially emphasize the development of training and education of individuals with the aim of having a steadily growing number of trained personnel capable of managing costs"<sup>26</sup>. This is directly connected with the commands that directly make decisions and participate in the process of operational planning of various types of operations, where the economic aspect of costs comes to the fore.

In the present moment it is inconceivable to plan any type of operation without considering the economic implications on the military and the society as a whole, which is the basis for engaging in such risky processes, thus opening the door to the other processes that follow such complex projects. In that sense, development of the control functions and risk monitoring are integral parts of project management in the military. This clearly emphasizes the aspect of real economic benefits and feasibility of all projects, including the operations of any kind.

The implications of project management in the military should be also viewed from the perspective of the legal framework governing a number of issues regarding the use of the military and performing of various operations. What characterizes the military as the system is a number of normatively formulated things, so that project management does not have a lot

---

<sup>25</sup> Imamović, N.: Uvođenje finansijskog menadžmenta troškova u vojsci, Vojno delo, zima/2013, Beograd, 2013.

<sup>26</sup> Ibid.

of freedom to deviate from the defined standards. It is especially the characteristic in the sphere of legal basis, while the freedom of commands (project management) exists in planning and decision-making process within the legally defined use of the military.

According to Rade Žugić, "the state and development of the defense system is directly affected by economic power of the country and its development. The expressed value of economic power and the potential for financing the defense is the available budget. It is the basis and framework for determining the defense policy and its development, as well as for adoption of regulatory, planning and other systemic and operational documents, which will, as much as it is possible, eliminate the discrepancy between the increasingly growing needs required for the defense of the country and limited material and financial possibilities - to ensure a stable system of defense and efficient use of limited resources".<sup>27</sup> This clearly highlights the framework and functioning of project management in the military, practically creating conditions for the democratic control of the military, which is basically the central issue of how the military works. It is also the key issue when it comes to the implications of the development of the economy and civil society on defense and functioning of the military under such conditions.

In the same article, the author emphasizes that "the Ministry of Defense and the Armed Forces, as the largest budget beneficiaries are obliged to spend the available funds for the functional purposes legally, purposefully, cost-effectively and efficiently, which is the basis and precondition for achieving the optimal operating model, which provides maximum combat capability, along with a more rational spending".<sup>28</sup> All this points out that the project management assumes a specific role, moving within the projected framework and its practical success depends on good organization that will "... ensure the implementation and enforcement of the adopted measures and activities at all levels, which, based on the principles of the defined responsibilities and accountability, will ensure that the available budget resources in a given period and for specific operations are used for the most important national priorities."<sup>29</sup> It is also the key issue of implications of the civil society on defense activities and the use of the military, and therefore also on performing different types of operations within of the projected missions of the Serbian Armed Forces. This is the way to ensure the implementation of planned and adopted economic measures and processes that are controlled and directed to be effective and realistic, and to ensure successful project management in the context of the objectives, which, ultimately, makes its effectiveness.

## Conclusions

The globalization of the world markets leads to increasing importance of the project manager competencies. Results of long education of project managers are consistent with the description of the professional profile of a project manager. Project managers can employ their skills at local, national and international labor markets. Compliance with

---

<sup>27</sup> Žugić, R., *Planiranje troškova operacije*, (članak) Vojno delo, zima/2014, Beograd, 2014, p. 74.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

EU framework competences provides an opportunity for mobility, flexibility and obliges the project manager for further training through "learning organizations", various associations and/or other forms of lifelong learning. The complexity of lifelong learning relates to the tendency of its integration with new technologies and close connection with the labor market.

Well-structured system, accreditation and standardization lead to planned outcomes and competencies, which are in line with national and EU framework of competencies and qualifications.

The system organized in such way "opens the door" to mobility and flexibility, and the fact that individual career paths of education lead to the applicability of knowledge in the global environment. Thus, also the commands at various levels can understand the challenges of a complex operating environment. The macroeconomic principles within individual nations are, often divergent because the history and institutions modify the way of interpretation of these principles.

The international integration of the economy is almost nowhere as important as it is Serbia. The implications of the widespread economic crisis have been drastic, especially on the fundamental activities of acquiring and efficient use of capital and investment in innovation. Poverty, as a growing phenomenon, raises the question: how to restore the dignity of the common man? The answer lies in the profits, because only the profit growth can eradicate unemployment.

Resolution of this issue is correlated with a more efficient implementation of corporate management standards, where tasks of the project manager are directly linked to the core of good practices of corporate management, and in the context of military organizations systems with efficient planning and execution of various types of operations and development of new technologies. In this sense, democratic processes are seen as a realistic assumption for the creation of a favorable (or more favorable) framework for the development of free market economy and economic growth. These are mutually processes, because economic development is a good basis for strengthening of democracy and the protection of private property. This in turn encourages investors to invest in projects, and directs governments toward more responsible conduct. Therefore, it is necessary to nurture democratically oriented teachers/trainers characterized by respect for other people's opinions, attitudes, and visions. Respect for individuality, personalization, knowledge sharing, leads to cooperation, teamwork in the classroom and the group dynamic that encourages social cohesion.

## *Literature*

[1] Bos, H.C, Sanders M. and Secchi C., *Private Foreign Investment in Developing countries*, D. Reidel Publishing Company, Dordrecht-Holland, Boston, U.S.A, (1974).

[2] Council of Europe, *Competences for democratic culture – Living together as equals in culturally diverse democratic societies*, Printed at the Council of Europe, 2016.

[3] Fenz A., *ECQA Certified EU Project Manager – Skill Card*, Erasmus + 2014.

[4] Horn, V.C.J., Wachowicz, M. J., *Osnovi finansijskog menadžmenta*, Data Status, Beograd, 2007.

[5] Imamović, N.: *Uvođenje finansijskog menadžmenta troškova u vojsci*, Vojno delo, zima/2013, Beograd, 2013.

- [6] Jovanović P., *Menadžment*, Teorija i praksa YUPMA, Beograd, 2010.
- [7] Karović, S., Župac, G., Ristić, V., *Vojni menadžment – naučna disciplina nauka o menadžmentu i biznisu ili nauka odbrane*, Vojno delo, 2011, br. 2, Beograd, 2011.
- [8] Lečić R., *Osnove finansija*, VŠPM, Beograd, 2009.
- [9] Lečić R., *Dizajn projektnog finansiranja*, XVIV Internacionalni simpozijum iz projektnog menadžmenta YUPMA 2015, Zbornik radova, Zlatibor, 2015.
- [10] Lečić, R., *Projektno finansiranje i ekonomski razvoj*, XX Internacionalni simpozijum iz projektnog menadžmenta YUPMA 2016, Zbornik radova, Beograd, 2016.
- [11] *Macroeconomics: A European Text – Third Edition*, Centar za liberalno-demokratske studije, Beograd, 2004.
- [12] Orlović S., *Demokratska civilnost*, Univerzitet u Beogradu, Fakultet političkih nauka, godišnjak 2007., str. 464 – 469.
- [13] Prahalad, C.K., *The fortune at the botton of the pyramid*, Pearson Education Inc. Publishing as Wharton Scool Publishing, 2005.
- [14] Rot, N. *Osnovi socijalne psihologije*, Zavod za udžbenike i nastavna sredstva, Beograd 1987.
- [15] Žugić, R., Planiranje troškova operacije, Vojno delo, zima/2014, Beograd, 2014.
- [16] <http://www.accreditedqualifications.org.uk/european-qualifications-framework-eqf.html>
- [17] <http://ec.europa.eu/social/main.jsp?langId=en&catId=101>  
<http://ec.europa.eu/social/main.jsp?catId=101&langId=en>
- [18] <http://euroguidance.eu/>
- [19] <http://lifelonglearning-observatory.eucen.eu/>
- [20] <https://www.weforum.org/>
- [21] <https://ec.europa.eu/programmes/horizon2020/> The EU Framework Programme for Research and Innovation/