

The background of the cover is a dramatic photograph of a volcanic eruption. A bright, glowing plume of orange and yellow lava or ash rises from a dark, jagged volcanic landscape. The scene is illuminated by the intense light of the eruption, creating a stark contrast between the dark rocks and the fiery sky.

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FOREWORD

Dear readers,

it is our great pleasure to present the new issue of Journal of Accounting and Management to you. This issue has been published while new challenges appear daily in the coronavirus pandemic.

In this issue, once again, you will find interesting articles and we invite you to read and share your knowledge and experience. All the papers were blindly peer-reviewed, requiring the acceptance by two independent reviewers to be published in this Journal.

With great enthusiasm we invite you to join our 22nd International Scientific and Professional Conference **Accounting and Management**, organized by the Association **Croatian Accountant** and the **RRiF College of Financial Management, Zagreb** which will be held on 9-10 September 2021.

We would like to thank all the persons involved in making of this Journal as we have, with this issue, entered our second decade of its publishing

Editor-in-Chief

Đurđica Jurić, PhD, College Professor

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DELUSIONS ABOUT CORPORATE GOVERNANCE FROM SOCIAL RESPONSIBILITY - Point of View -

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ABSTRACT

Recently, companies are expected to continue generating profits while maintaining the highest standards of governance internally. In reality it seems like a mission impossible. The author shows some blind alleys in recent professional literature. He deals with the inappropriate definitions of stakeholders together with the weakly defined purpose of corporations and their performance as well. Better solutions are proposed. They require quite big changes in theory and practice, especially in both education and political system.

Keywords: *corporate governance, social responsibility, sustainable development, value added, company's performance.*

1. INTRODUCTION

There are vigorous debates about corporate governance in professional literature. A special topic are discussions from social responsibility point of view. Some authors think that most of the business globally is carried out by corporations. They are therefore very influential in shaping the growth of economics of the world (e. g. Aneja, 2015, 155). The result is that economic interest of the corporations and the expectations of society should be in a mutual existence. It is reflected in several ideas of corporate governance, sustainable wealth creation, corporate philanthropy and advocacy for the goals of the community (Aneja, *ibidem*, Jamal *et al.*, 2008). It seems quite reasonable, but all of these ideas have some crucial weaknesses. One of them is the fact that debates on corporate social responsibility are becoming similar to the philanthropy. The second weakness are attempts to declare corporate responsibility from stakeholder point of view. Both deficiencies lead to the discussions about morality of capitalism (e.g. Penacchi, 2021) or to the emphasizing of human rights (e. g. Sharma, 2018). It will be discussed deeply in the continuation to show that such debates are directed to blind alley, without an important effect on both theory and practice.

2. DELUSIONS ABOUT STAKEHOLDERS

A relatively large diversity of stakeholder definitions in professional literature¹ is obvious, so it is useful to structure or classify them appropriately. In addition, the classification of stakeholders is important in terms of the content of reporting required by the IESBA Code in point 220 (IESBA, 2018) as well. One option is to classify stakeholders into internal (e.g., shareholders, management, employees) and external (e.g., business partners, creditors). Such a division is simple, but not suitable for a more detailed discussion and analysis of stakeholders. More detailed is the model, which divides stakeholders into investors, customers, suppliers, and employees (Boatright, 2000, 357). The same author suggests a division into investors, political groups, customers, employees, trade associations, suppliers, government, and communities as a more appropriate model (Boatright, *ibidem*). The problem with the above rankings of stakeholders is not only their number, but above all their diversity of interests. On this basis, conflicts between stakeholders can arise, which the corporation must take into account (e.g. Prindl, Prodhon, 1994). Clearly, it is essential that corporations manage and coordinate the different interests of stakeholders. The professional literature usually contributes to this by classifying stakeholders, but usually only in the form of a more detailed list of stakeholders' types,

¹ More about it in Bergant (2021).

such as: customers, partners, employees, trade union, local community, society, government, NGOs, associations, competitors, suppliers, investors, shareholders (Pohl, Tolhurst, 2010).

Some authors think about corporate social responsibility, in this way: "companies are legally responsible to shareholders and strategically responsible to stakeholders" (e. g. Brooks, Dunn, 2018). Although the separation of legal and strategic corporate social responsibility is in some ways contrary to the consistently understood principles of sustainable development, we must conclude that the essence is certainly the corporates' responsibility to stakeholders, which includes shareholders as well. It is therefore important to find out why the company should be accountable to stakeholders.

The main stakeholders' characteristics is that they bear some risk, connected with the corporation business. This fact offers a new (better) definition of stakeholders, namely: *stakeholders are those who contribute to risk management in the company's operations in creating value added*. This contribution means that the stakeholder assumes a certain part of the risk in the company's operations. At the same time, this fact also provides a substantive basis for justifying the company's liability to the stakeholders from corporate social responsibility (CSR) point of view.

From the point of view of risk-taking, stakeholders can be divided into:

1. Governors and management who, in addition to bearing the risk, also contribute to risk management through their decisions; these are mainly employees who are co-owners and partners or majority shareholders (active co-owners of the company's capital) and top management, but they can also be others (e.g. business partners who contractually assume part of the risks by participating in the joint venture or in the case of strategic outsourcing).
2. Non-governors, i.e. those, who bear a negligible small part of the company's risk and whose common feature is that they are directly or indirectly affected by better or worse results from the company's operations, but they cannot directly influence business decisions; however, they have the possibility of different types of control. Non-governors are:
 - Financiers or creditors to whom interest belongs;
 - Employees as non-co-owners as bearers of intellectual capital;
 - Trade unions;
 - Supervisory authorities within the corporation;
 - The state, to which the taxes belong;

- Minority shareholders and portfolio investors to whom dividends or other forms of participation in surplus value added belong (inactive co-owners of the company's capital);
- The narrower and also wider society in various organizational forms that may be affected by the association, for example through its environmental policy;

It should be emphasized that these groups are not static, but change, as their interest can change relatively quickly for a variety of reasons. This means that group members (individuals or associations) move from one group to another. Stakeholders' interest varies depending on how strongly they feel the risk they are exposed to. This feeling is more and more present with the development of civilization, especially informatics and media. It also increases the interest in greater influence in the corporate operations. The above definition of stakeholders is mainly principled, as they also differ according to which corporation (and its specifics) we have in mind. The final definition of stakeholders is therefore objectively conditioned by the concretely selected entity.

It logically follows from the word stakeholder that stakeholders should also participate (in the proportion to the risk taken) in the value added created within the corporation. This statement requires additional explanation in next section.

3. DELUSIONS ABOUT THE PURPOSE OF THE CORPORATION

The definition of the purpose of companies is a crucial starting point for the discussion of their governance. Unfortunately it is an area of many discussions without a clear results. There are two opposite sides. On one side, there are the authors, who argue that profit is not the only purpose and that organizations should make a drift from profit maximization to value maximization, because of considering also the stakeholders' interests (e.g. Freeman *et al.*, 2010, p. 24). On the other side, there are the authors, who still stubbornly defend shareholder value as a main purpose of organizations, especially on long-term (e.g. Edmans, Gosling, 2020). Hence, the dilemma still remains vital and unsolved. Such a situation diminishes the value of stakeholder theory and all efforts regarding the development of corporate social responsibility remain almost near to philanthropic principles (Bergant, 2020).

Therefore, "new eco-political theories of social responsibility will remain on paper because the power structure— the dynamics of the economic system —has not changed" (Adizes, 2020a). Adizes even named coronavirus pandemic as a missed opportunity to make strategic changes that humanity needs to survive (Adizes, 2020). The basis of power structure that Adizes mentioned,

is obviously the corporate law that gives the right of deciding about the profit use to the owners of capital.

It is really astonishing that nobody mentions that this part of the law has not any economic or some other logic. Nevertheless, it results in the opinion, that "shareholders are the owners of the firm" (e.g. Henningfeld *et al.*, p. 17). It is purely arbitrary statement. In this way, the problem of possible predomination of shareholders' interests, remains not solved. This allows a position, where self-interested managers pursue their own interests at the expense of society and the firm's financial claimants (Jensen, 2002, p. 242). It means a new starting point for discussion about organizations' purpose.

It is therefore important to find out why the company should be accountable to stakeholders. Most important is the ethical principle of fairness enforced by the value-added law. Every contribution to the creation of value added should be properly evaluated and rewarded. The contribution to the creation of value added also means the contribution to the reduction of business risk (Bergant, 2017). The value-added law has to be considered. It means that a proper system of distributing value added among all stakeholders, who bear a risk, should be established. Otherwise, the entropy of all organizational systems will grow uncontrollably because of the value-added law, which says (Bergant, 2017):

1. Value added is the net outcome of the organizational system in managing the risk inherent to the system and belonging to risk holders in proportion to their contributions to the functioning of the organizational system (*the aspect of creating value added*).
2. The disproportionately high or disproportionately low participation of individual risk carriers in the value added (according to their work contribution) increases the entropy of the organizational system and threatens the realization of its sustainable development (*the aspect of value-added guidance*).

The value-added law is a *general law* because of its validation in *all* socio-economic systems (past, present and future ones), which are oriented towards sustainable development and all human associations, including families.² *It is valid and operates also for only two people and through the entire human history. The value-added law operates regardless of the wishes or activities of the people and regardless of the normative organization of the organizational system or its environment. It is, therefore, totally independent of the human will.*

The above statements offer a new (better) definition of stakeholders, namely: stakeholders are those who contribute to risk management in the

² None of the partners in the family usually does not want to be exploited.

company's operations in creating value added. This contribution means that the stakeholder assumes a certain part of the risk in the company's operations. At the same time, this fact also provides a substantive basis for justifying the company's liability to the stakeholder from corporate social responsibility (CSR) point of view.

On the basis of the value-added law, the entropy of organizational systems is mainly the result of the imbalance between participants' contributions and their participation in value added. This imbalance is devastating because it works against cooperation and mutual trust, which is necessary in the context of interdependence (Judt, 2011, 57 and 80).

The contribution to the functioning of the organizational system (in different forms of managing the risk) is given by stakeholders of the organization. The participation in managing the corporate risk is at the same time also a criterion for the definition of stakeholder according to previous section.

The value-added law in its own way shows the shortcomings of various theories of a firm, including contract theory. An attempt of improvement presents a contracting theory of organization that sought to take into account the interests of all stakeholders (e.g., Scott, O'Brien, 2019, p. 312, Kálay, 2002). This attempt has remained halfway through, as it still assumes profit as basic information.

4. DELUSIONS ABOUT CORPORATE PERFORMANCE MEASURES

It is understandable that good governance leads to good corporate performance. Therefore, appropriate measures of corporate performance should be monitored. From sections above, it is clear that following profit instead of value added is not the right way. Profit cannot be a basis for sound stakeholder policy.

At the same time, corporate governance should consider long-term view. It means that only triple bottom line (e.g. Elkington *et al*, 1998) which encompasses economic, social and ecological is the right direction of corporate policy from social responsibility and sustainable society point of view. Therefore, traditional accounting should be improved as a basis of efficient and effective information system.

5. CONCLUSION

The possible conclusion out of previous sections is that there are possibilities to overcome the dilemmas about corporate governance, especially from stakeholders' and organizations' purpose point of view. It is very important from social responsibility point of view as well. The highest responsibility lies

on academics and scholars who should find enough courage to overcome the indoctrinated opinion about the profit paradigm in capitalism.³ Otherwise, we all will become witnesses of growing entropy and the decay of the society.

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³ Namely some of them are still sure that there is no great need to change the law requirements (e.g. Freeman et al., 2010, p. 229).

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Ključne riječi: korporativno upravljanje, društvena odgovornost, održivi razvoj, dodana vrijednost, poslovanje tvrtke.

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APPLYING INTERNATIONAL STANDARDS OF SUPREME AUDIT INSTITUTIONS 5510 CONCEPT ONTO FUNDING OF DISASTER MANAGEMENT IN BOSNIA AND HERZEGOVINA

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ABSTRACT

Sustainable, efficient, and effective protection and rescue management is primarily dependent on the adequate allocation of the necessary financial resources in order to plan and act in cases of expected/unexpected hazards, risks, accidents and natural and other disasters. So, this paper assesses funding for disasters management at different levels of government in Bosnia and Herzegovina. Researchers referred to International Standards of Supreme Audit Institutions 5510 - The audit of disaster risk reduction to obtain responses which were subsequently tested by Kruskal-Wallis, Mann-Whitney U, Descriptive statistics, Ordered logit regression, and Spearman R correlation. The findings confirmed that disaster funds haven't been adequately allocated to different levels of government in Bosnia and Herzegovina.

Keywords: *funding, performance auditing, disaster management, protection & rescue*

1. INTRODUCTION

Well known saying "An ounce of prevention a pound of cure" is vividly demonstrated by Federal Emergency Management Agency (FEMA), U.S. Economic Development Administration (EDA) and U.S. Department of Housing and Urban Development (HUD) who have found that mitigation funding can save the nation \$6 in future disaster costs, for every \$1 spent on hazard mitigation (National Institute of Building Sciences, 2018). Also, many other studies including Gall and Friedland (2018) have indicated that pre-disaster management is highly cost-effective so it is accepted that a monetary unit invested in pre-disaster management can save several monetary units in post-disaster management while pre-disaster management has gained great importance (Kaplan et al., 2018). Additionally, according to many scholars, disaster losses decrease – at least in relative economic terms - with wealth, and economic development which will solve the disaster risk issue. Others have noticed that development can be either risk-decreasing or risk-increasing (e.g., because urbanization can lead to the development of slums in high-risk areas), and that rich countries also have problems dealing with natural hazards (Hallegatte, 2014, p.3).

In anyway, adequate financing is one of the key conditions for efficient emergency management because it is necessary to undertake a series of activities, procedures, development of studies, plans, organization, procurement of equipment and resources, staff education, training, infrastructure, etc., so it is necessary to allocate certain funds for sudden and unplanned protection and rescue actions.

Funds for financing the activities in emergency management in Bosnia and Herzegovina (BiH) are generally realized through budgeting system at different levels of government; funds of legal entities; insurance; voluntary contributions; international aid-grants; and other sources established by laws (Official Gazette of BiH, 2004), Official Gazette of FBiH, No. 102/13, Official Gazette of the RS, no. 121/2012, and Law on the budget of Brčko District of BiH. Also, some of the risk assessments to natural and other disasters have defined in what percentage certain disciplines of management in protection and rescue (P&R) programs should be financed (Federation of BiH, 2014, p.68) so we can say that financing is done on the basis of risk assessments as well as programs for the development of institutions at various levels of government, and annual work plans.

Therefore, the objective of this research is to determine whether the disaster funds have been adequately allocated to every administrative level of government in BiH enabling them to create greater capacities to cope with hazards, accidents and disasters.

2. FUNDING OF PROTECTION AND RESCUE INSTITUTIONS IN BIH

All administrative levels of governance in BiH allocate funds for P&R institutions at their own level. The Council of Ministers of BiH proposes funding of the budget of BiH institutions at state level (first tier of government). In accordance with article 23 of Framework Law (Official Gazette of BiH, 2008) funds shall be allocated in the budget of the institutions of BiH and international obligations of BiH for equipment, training, operation and functioning of the Operations Centre 112; for equipment, training, operation and functioning of the Coordination Body; for professional development and training of staff; to support of international protection and rescue operations; for rendering assistance to other countries, Entities and the Brcko District of BiH in case of natural or other disasters; for additional equipping and training of units set forth in Article 13, paragraph 1, subparagraph k), of this Law; and for other needs in accordance with Framework Law on the Protection and Rescue of People and Property in the event of natural or Other Disasters in Bosnia and Herzegovina (Parliamentary Assembly of BiH, 2008). According to The United Nations Office for Disaster Risk Reduction - UNISDR and World Bank (2008) report Ministry of Security (MoS) has allocated about €0.25 million per year for civil protection. Additionally, the same report states that MoS of BiH is expected that state level can be allocated with €2.8 million for the improvement and development of the P&R system at state level through implementation and harmonization of the Law on protection and rescue but this activity has not been implemented yet due to budget constraints.

According to the Law on protection and rescue in Federation of BiH - F BiH (second tier of government), funding is defined by chapter XII Financing and fees (articles between 179 and 189). An article 179 generates that the civil protection is funding from the following sources: budget of the F BiH, cantons and municipalities; funds of legal entities; insurance; voluntary contributions; international aid-grants; as well as other sources established by this and other laws (Official Gazette of Federation of BiH, 2003, p.2133).

The F BiH's law (Official Gazette of Federation of BiH, 2003, p.2133), explicitly, has not defined the percentage of funding for civil protection in budget at different administrative levels in F BiH while risk assessment of F BiH defines that the budgets at all tiers of government must ensure allocation funding for civil protection in the amount of 0.5 % of the total budget for the fiscal year for F BiH, and 1 % from the budget of the fiscal year for cantons and municipalities. If municipalities and cantons are unable to provide the funds in this way, they have to apply the principle of connectivity (Official Gazette of Federation of BiH no. 4/12 and 80/13, 2014, p.68). It is important to emphasize that the

principle of connectivity has not been incorporated within the Law on protection and rescue in F BiH. That might be reason why civil protection authorities in F BiH differently implement this principle. Regardless of inquiries neither Federation civil protection administration nor municipalities have sent a response on researchers request for explanation of connecting/sharing funds related to application of principle of connectivity. It seems that protection and rescue managers are confused with this principle. Some of them believe that there might be a mistake in regulating this principle and therefore should be removed from the risk assessment. The others stated that the principle is not included in the law and they are not obliged to precisely follow the risk assessment guidelines. Some others believe that principle has to be defined more precisely due to income differences in cantons and municipalities.

The principle of connectivity in the practice we can see through next example, in 2020, Program for protection, rescue and security of "Novi Grad" municipality Sarajevo has approved a budget for civil protection in amount of €1,081,177.81 (Novi Grad Municipality, 2020) of which €51,129.18 has been planned as a transfer for assistance in emergency situations to other subjects. Also, "Sarajevo Centar" municipality has earmarked budget for civil protection in amount of €982,958.64 and a transfer was planned to support pre-disaster activities in other municipalities and cities in the amount of € 146,996.41 (Sarajevo Centar Municipality, 2020). On the other hand, there are many municipalities that do not have the possibility to allocate funds for even 1% of their budgets according to vulnerability assessment, and therefore cannot make any transfers on this issue. It is evident that most of the civil protection institutions funds goes to employee salaries. In general, research shows that the budget of institutions at different levels of government are not standardized and not presented in detailed view, consequently it makes impossible comparing protection and rescue funds.

Nevertheless, it is worth assessing the annual budget allocated by F BiH government for civil protection. In 2020, it was about €11,560,694.94 (Government of F BiH, 2020), and was mainly used to enhance preparedness of civil protection headquarters through the provision of equipment and training; for protection and rescue services and units; and for mitigation activities was noted by UNISDR and World Bank (2008). An amount of €1,921,946.18 was allocated for non-current assets expenditures. There are evident capital investment transfers of funds to other levels of government in amount of €536,856.47. Also, the budget of the Federation has envisaged the amount of special fee for civil protection that is expected to be collected in 2020 (Government of F BiH, 2020). Moreover, current transfers to other levels of government and funds were planned in the amount of €1,124,842.13.

In fact, an important instrument of financing civil protection in Federation of BiH at this moment is paying a special fee for protection against natural and other disasters which is regulated by Law on civil protection in F BiH (Official Gazette of Federation of BiH no. 39/03, 22/06, 43/10, 2010). According to article 180 of this Law all legal entities/companies and citizens who are self-employed as well as government bodies at all levels of government in the Federation shall pay a special fee for protection against natural and other disasters amounting to 0.5% (of the salary base) of net salary of employed persons and all persons engaged under a contract of performing temporary jobs and contract. Special fee is calculated and paid simultaneously with the payment of salaries. The funds generated by the provisions of Article 180 of the Law are kept in the separate transaction account that belongs to the Federation, cantons and municipalities (Official Gazette of Federation of BiH no. 39/03, 22/06, 43/10, 2010).

It is important to point out that risk assessment of F BiH (Official Gazette of Federation of BiH no. 4/12 and 80/13, 2014, p.68) suggest that means collected by special fee should be planned for protection and rescue in the following framework ratio: 30% for equipping civil protection structures; 20% for prevention; 40% for remedying damage; 5% for the training of civil protection structures (trustee services, administration, committees, services for protection and rescue, civil protection units and population); and 5% of the costs of participation in protection and rescue operations in case of natural or other disasters. Thirty percent (30%) of funds planned to be invested for equipping are enough to keep operational level of basic services of protection and rescue institutions.

Out of this instrument fifteen percent (15%) of registered assets go to Federation of BiH, 25% to cantons, and 60% to the municipalities in which assets are realized and are used exclusively for the purposes defined by the Law on Protection and Rescue in F BiH (Official Gazette of Federation of BiH no. 4/12 and 80/13, 2014, p.67). In February 2016 some members of Parliament of BiH (F BiH Parliament, 2016) proposed to change (increase) the quota distribution of special fee for protection and rescue to the municipalities and cantons (instead of 15% allocated to F BiH make 7% going to FBiH, and 8% going to cantons while the rest 85 % of collected money should be allocated to municipalities) however the regulation remained intact. These funds are being accumulated during years on this "special fee" separated transaction account. The amount of the total funds generated by special fee can be calculated with following formula: the number of employees in the Federation of Bosnia and Herzegovina x average net wage in the Federation of Bosnia and Herzegovina x 12 months x 0.5%. According to data from the Tax Administration of F BiH on 31 December 2020, the number of employees amounts to 520,493 (Tax administration of F

BiH, 2020) while the average net wage for the period January-September 2020 was €485.72 (Tax administration of F BiH, 2020). If we include the presented numbers in the formula then we have got that the Federation of BiH ensures €15,169,059.17 of the special fee for protection and rescue on an annual basis. The authors estimate is that the amount of assets which institutions receive on the basis of special fee is even higher because it is also calculated on the net amounts which different persons receive on the basis of concluded contracts of temporary and occasional jobs (work contracts, royalties, etc.) of citizens. But there are no official records on the average amount of compensation paid to the number of concluded employment contracts.

The criteria used for the distribution of 60% of special fees to the municipalities is the place of work of any employed individual. This regulation creates disproportionate form of inflow of funds to municipalities. The reason may be the inflow of funds in relation to the number of employees according to Employer Registration in that municipality and the collection of a special compensation related to this condition. As of December 07, 2020, the number of employees per place of residence in the municipality of Livno was 5,105 and the number of employees per employer registration in that municipality was 4,479 while in the municipality of "Centar Sarajevo" the number of employees per place of residence was 19,797 while the number of employees per employer registration was 44,515 (Tax administration of F BiH, 2020).

Therefore, it is expected that Center Sarajevo municipality has received in 2020 budget about €1,299,427.35, while the municipality of Livno has expected €130,505.20. This method of calculation puts the underdeveloped municipalities in a subordinate position in the distribution of revenues whose actual inhabitants work in other municipalities, and leave that compensation there. The local community does not benefit from their work (in terms of receiving special fee for natural and other disasters) in other municipalities. Therefore, in February 2016, Parliament of F BiH have had initiatives and amendments of the Directive of calculating tax payments (special fee) for protection against natural and other disasters in order to enable collection of fee "according to the place of residence of the employed persons" instead of collection fee by place of work municipality where the employed persons' employer registration and location is. The proposed initiatives have not yet been adopted. In general, a conclusion was drawn that changes and amendments of regulatory documents take a long time.

If all institutions associate their funds for the procurement of scarce resources, then the whole system can get greater benefit. Since this is a significant amount of assets it is necessary to consider whether the money is allocated for right purpose in line with law provisions.

Similarly, in another entity, Republic of Srpska (RS) financing protection and rescue is provided by the budget of the RS (second tier of government) and municipalities; funds of legal entities; insurance; voluntary contributions; international aid-grants; and other sources established by other laws (Parliament of Republic of Srpska, 2017, p.42).

The budget allocated for civil protection administration of RS was €4,360,501.67 in 2020 (Parliament of Republic of Srpska, 2020). Expenditures for salaries were €2,515,556.05 and €1,141,203.47 for investments in non-current assets (buildings and equipment) while other expenses were allocated to the current maintenance. RS government provides organizing, equipping and operations of the Directorate of Civil Protection, as well as preparing, equipping, training and work of the headquarters for emergency situations and specialized units for protection and rescue in RS. The costs of taken measures for protection and rescue, supply of special equipment, material help to remove the consequences of natural and other disasters, prevention of the occurrence of further damage, ensuring basic living conditions in the affected area are responsibility of RS government. Currently, RS allocates 1% in budgets at entity, municipal and city levels for civil protection (Parliament of Republic of Srpska, 2020).

Additionally, article 155 of the same Law (Parliament of Republic of Srpska, 2017, p.42) defines that municipality or city funds: preparation, equipment, training and staffs' work for emergency units and teams of civil protection and their costs borne by the implementation of protection and rescue measures; customization and maintenance of protective shelters and other facilities; training the population in the area of protection and rescue; repairing part of the damage caused by natural disasters and other disasters in accordance with the financial possibilities and the decision of the competent authority of the municipality or city and other protection and rescue in accordance with this Law and other regulations. The municipality or city plan and allocate special funds of 2% in budget. Fifty percent (50%) of special fund is used for preventative activities and 50% for equipment and training structure for protection and rescue (article 153). Article 23, paragraph z of the Law, pertaining to the rights and duties of companies and other legal entities define that they also participate in co-financing preventive activities of local governments in proportion to the scope and extent of the threats arising from their activities. Article 69 paragraph 2 of the Law allows municipalities or cities using of funds realized from fees for lease of shelters. Earned money is exclusively used for financing the construction of new shelters as well as maintenance of constructed shelters. Annually this influx is about €178,952,15 of which 25% belongs to the Republic Civil Protection Administration, and 75% to municipalities (*Center for Security Studies – BH, 2010, p.43*).

Currently, RS is in the process of preparing proposals (amendments) to the law which stipulate separation of 2% of the direct source or the budget of the RS' cities and municipalities for civil protection. Association of municipalities and cities gave full support to the decision of each local community sets aside about two percent for developing a system of civil protection (Blic, 2017).

According to Article 78 of Brčko Districts' Law on civil protection (second tier of government), the system of protection and rescue is financed from: The District budget, contributions, donations, grants and international aid, and other sources in accordance with the law. In District's budget at least 1% (one percent) of assets is planned and allocated for special usage for civil protection of which 50% (fifty percent) is used for preventative activity, and 50% (fifty percent) for the equipment, and training structure of protection and rescue (Brčko district government, 2016). Brčko District (BD) allocated €4,632,108.58 for Civil Protection budget in 2020 (Brčko district of BiH, 2020).

Assessment and analysis of expenditures necessary to maintain and develop the system of protection and rescue is carried out within the program of development which is the basis for the budgeting of planned projects, measures and activities in the field of protection and rescue.

It is important to note that implementation of BiH Reform Agenda for 2015-2018 (Council of Ministers of BiH, 2015, p.4) should have influenced the financing of civil protection. By Economic Policy for 2016 of RS (Parliament of RS, 2016) and act of F BiH parliament „structural reforms to stimulate economic growth and job creation“ in F BiH (Government of F BiH, 2015, p.2) administrative bodies at different administrative levels of management are tasked to improve the business climate and competitiveness. In that sense, BiH has committed itself to the effort to eliminate the contribution of solidarity tax in the RS which was equivalent to the Fund to help flood-hit areas in F BiH and special fee for the protection and rescue of natural and other disasters in the Federation of BiH until the end of December 2016. Accordingly, in December 2016, the RS Peoples Assembly adopted the Law on the termination of the special contribution to the solidarity tax which came into effect from beginning of 2017 (Parliamentary assembly of RS, 2016). Additionally, in accordance with the Law on protection of fire of RS all companies operating in RS are obliged to calculate and pay “the fire fee” amounting to 0.04 % of the operating income. This fee has not been yet eliminated.

F BiH created a proposal of amendments to the Law on protection and rescue of people and material goods from natural and other disasters which purpose was to eliminate para-fiscal levies in December 2016. However, the law was not adopted by the end of 2020. The director of Civil Protection Administration of F BiH during our interview mentioned that there are some

negotiations between domestic authorities and international community to keep special fee in force.

If this goal is not excluded from Reform agenda this might be a reason why the P&R institutions may have lost extra funds for civil protection. Thus, pooling of funds and an adequate allocation of budget funds for the financing of the Civil Protection will have great importance in future.

The reforms are carried out to establish the basis for negotiations on the individual programs of financial and technical assistance from international financial institutions and the European Union as well as with other donors and partners who may want to support the reform agenda of BiH. Also, significant progress on the reform agenda will be necessary for an application of BiH membership that shall be reviewed by the EU. In this sense, governments continually taking measures to harmonize BiH procedures and legislation to the EU (Council of Ministers of BiH, 2015, p.6). Once the Law is adopted and the employers stop to pay a special fee in F BiH, civil protection institutions will be faced with the problem of financing, because the current regulations allowed them to have greater inflow of funds in this regard. Because the system has been in force for years, it would be difficult to replace those funds.

Finally, it is important to point out that the experience during the COVID-19 pandemic showed that it was good to have funds in separated account collected from the special tax for protection against natural and other disasters. On the other hand, there were lacking "previously adopted mechanisms (laws, decisions, procedures, etc.)" that would be activated and implemented as soon as the government to do so to procure required equipment and assets in a public and transparent manner in order to quickly save lives and property of BiH citizens.

3. RESEARCH METHODOLOGY

Kaplan and Isaković-Kaplan (2018) explained that today, countries are doing different analysis/measurement in order to assess efficiency of different systems within government. Peters emphasized that citizens should have the right to know what actions have been taken in their name, and they should have the means to force corrective actions when government acts in an illegal, immoral, or unjust manner. Accountability provides government with a means of understanding how programs may fail and finding mechanisms that can make programs perform better (Peters, 2007, p.15). Thus, public administrations need to take concrete commitments to advance transparency, participation, and public accountability in government (Open Government Partnership, 2021). There are a significant number of countries that are using Performance auditing as young discipline

from the accounting and auditing area to assess different governmental systems. Since a significant number of countries are using International Standards of Supreme Audit Institutions (ISSAIs) for performance measurement of their governmental agencies so the researchers also used ISSAI 5510 - The audit of disaster risk reduction (DRR) like Kaplan and Isaković-Kaplan (2018) as a great supportive tool for performance auditing/assessment of disaster funds and grants administration.

Based upon referent literature and data already portrayed in previous chapter, the research question of this article could be articulated as whether disaster funds and grants have been adequately incorporated at different administrative levels of government in BiH? In order to assess such a research question, main assumption states that: "Disaster funds haven't been adequately allocated to every administrative level of government in BiH thus creating different capacities to cope with hazards, accidents and disasters".

To assess this assumption, researchers, used questionnaire mainly referred to ISSAI 5510 and asked 10 questions plus one specific question directly related to our elaborated hypothesis to research. Survey questions were organized in the Likert scale (5 = strongly agree; 4 = agree; 3 = neutral; 2 = disagree; and 1 = strongly disagree); In terms of sampling the members of different civil protection, defense and security organizations at state, entity, district, cantonal and municipal/city level were selected for participation in the survey. The main hypothesis is tested by using respondents' answers to direct statement 1 while other statements, were used as an ordinal variable for descriptive statistics, correlation analysis and ordered logistic regression methods used for data analysis like Kaplan and Isaković-Kaplan (2018). Those statements/hypotheses are:

1. Disaster funds are adequately allocated for P&R institutions at respondents' level of governance.
2. The central government and/or the authority responsible for disaster risk reduction have a complete overview of the funds received and/or allocated for disaster risk reduction activities by all relevant bodies in BiH.
3. There are specific laws or procedures in the country that govern the allocation and utilization of funds for the National Disaster Plan/substitute tools.
4. The disaster risk reduction policies have influenced authorized institutions to allocate the funds and to support projects for receiving funds.
5. Respondents' institution has been fairly allocated with funds collected by fee (natural and other disasters) from employed citizens.
6. The disaster risk reduction projects/programmes are completed on time and within the budget.

7. The flexibility is allowed for the use of otherwise earmarked funds in budgets in emergencies/preparedness for imminent disaster events.
8. The government has made use of cost-benefit and similar analyses to identify realistic alternatives.
9. There is an adequate strategic reserve of disaster relief goods.
10. A financial plan for P&R institution has been prepared according to the strategy/programme/plans.
11. The P&R institution is assigned a budget for disaster risk reduction to provide incentives for low-income families, communities, businesses and the public sector to invest in reducing the risks they faced.

Collected data (during 2017-2018) from 145 respondents that belongs to the civil protection, security, and defense institutions at all administrative levels of governance who belong to protection and rescue system were tested by several tests like Kruskal-Wallis H, Mann-Whitney U, Descriptive statistics, Ordered logit regression, Spearman R correlation, and one open ended question in order to identify differences between treated and untreated elements related to funding between different levels of government in Bosnia and Herzegovina and what was the main problem for non-efficiency of protection and rescue organization/institution at their level of governance.

4. RESEARCH FINDINGS AND DISCUSSION

The results of the survey follow the several methods explained in the methodology, so table 1 shows that the 145 respondents, determined by their authorities responded to the presented survey's statements and our hypothesis was tested by *using* Kruskal-Wallis H.

Table 1. Descriptive statistics for statement 1

Administrative level of governance	N	Mean	Std. Dev	Std. Error
BiH (1 st tier of governance)	12	2.75	1.215	0.351
FBiH (2 nd tier of governance)	10	3.70	1.160	0.367
RS (2 nd tier of governance)	6	1.83	0.753	0.307
BD (2 nd tier of governance)	4	1.50	0.577	0.289
Cantons (3 rd tier of governance)	41	3.85	1.236	0.193
Municipalities (4 th tier of governance)	72	2.71	1.388	0.164
Total	145	3.03	1.416	0.118

Source: prepared by authors based on an empirical research results

A Kruskal-Wallis H test showed that there was a statistically significant difference at different level of governance in opinion about adequately allocation of disaster funds. The results are listed as follows: $\chi^2(5) = 26.689$, $p = 0.000$.

Then, researchers used a Man Whitney U test to determine exact differences between various levels of government. *The* table 2 shows that the differences are almost identically allocated at all levels of government. The 7 of 15 individual paired Man Whitney U tests showed quite convincing significant differences, without asymptotic value. On the other hand, testing the differences between the responses at the state level and Brcko District shows asymptotic insignificance of differences (0.061 close to the margin). Other relationships are generally solid and there are no significant differences in the responses.

Table 2. Mann-Whitney U test for statement 1

Administrative level of governance		Mann-Whitney U	Asymp. Sig. (2-tailed)
BiH	FBiH	34,500	0.085
	RS	19,500	0.109
	BD	9,000	0.061
	Cantons	126,500	0.009
	Municipalities	425,500	0.932
FBiH	BiH	34,500	0.085
	RS	6,000	0.008
	BD	2,000	0.009
	Cantons	183,000	0.586
	Municipalities	215,000	0.034
RS	BiH	19,500	0.109
	FBiH	6,000	0.008
	BD	9,000	0.480
	Cantons	27,000	0.002
	Municipalities	142,500	0.155
BD	BiH	9,000	0.061
	FBiH	2,000	0.009
	RS	9,000	0.480
	Cantons	12,000	0.004
	Municipalities	76,000	0.102
Cantons	BiH	126,500	0.009
	FBiH	183,000	0.586
	RS	27,000	0.002
	BD	12,000	0.004
	Municipalities	788,000	0.000
Municip	BiH	425,500	0.932
	FBiH	215,000	0.034
	RS	142,500	0.155
	BD	76,000	0.102
	Cantons	788,000	0.000

Source: prepared by authors based on an empirical research results

Based upon these finding it is already safe to believe that main hypothesis: "Disaster funds haven't adequately been allocated to every administrative level of government in BiH thus creating different capacities to cope with hazards/ disasters" seems to be supported. Once we look at only descriptive statistics' (3.) it is fact that responders in survey feel their programs are underfunded. First, they answered that the central government and/or the authority responsible for disaster risk reduction have a partial overview of the funds received and/or allocated for disaster risk reduction activities by all relevant bodies in BiH (S2). Secondly, survey participants at F BiH and Canton level responded that there are specific law or procedures in the country that govern the allocation and utilization of funds for the National Disaster Plan while responders at other administrative levels of governance evaluated this statement with lower score (S3). Similarly, respondents gave low agreement with statement that the disaster risk reduction policies have influenced authorized institutions to allocate the funds and to support projects for receiving funds (S4). Only responders at the F BiH level agreed with that statement that their institution has been fairly allocated with funds collected by fee (natural and other disasters) from tax payers (S5). They all have complaint about financing their P&R institutions. Obviously, it is difficult to complete the disaster risk reduction projects on time and within the budget (S6).

Additionally, there is limited flexibility for the use of otherwise earmarked funds in budgets in emergencies/preparedness for imminent disaster events (S7). Survey participants were queried regarding the government making use of cost-benefit and similar analyses to identify realistic alternatives (S8). Their responses were neutral. They are not satisfied with available strategic reserves of disaster relief goods (S9).

Also, among the survey participants, those at F BiH level agrees and Cantons slightly agrees that a financial plan for P&R institution has been prepared according to the strategy/programs/plans while others are not supporting this idea (S10). In the last statement of this section survey participants gave low score (mean 2.24) to the statement that P&R institutions have not been assigned a budget for disaster risk reduction to provide incentives for low-income families, communities, businesses and the public sector to invest in reducing the risks they face (S11).

Table 3. Descriptive statistics for S 2-11

Stat	Mean for administrative level of governance						
	BiH	FBiH	RS	BD	Cantons	Municipalities	Total
S2	250	2.80	3.00	1.25	3.90	3.32	3.31
S3	2.83	4.10	2.50	1.25	4.29	3.49	3.60
S4	2.50	3.70	1.83	1.50	3.80	2.86	3.08
S5	2.42	4.20	1.67	1.50	3.66	2.59	2.92
S6	2.83	3.10	2.67	1.25	3.63	2.93	3.08
S7	2.17	3.30	3.50	1.25	3.56	3.32	3.24
S8	2.58	3.40	2.83	1.50	3.49	2.87	3.02
S9	2.67	3.90	2.67	1.75	2.88	2.08	2.50
S10	2.50	4.00	3.17	1.25	3.85	3.38	3.42
S11	2.08	2.00	1.83	1.00	2.78	2.08	2.24

Source: prepared by authors based on an empirical research results

In order to determine the relationship between two ordinal variables (statement 1: focused on hypothesis and statements from 2 to 11 as supportive statements for testing elaborated hypothesis) the researchers additionally used Spearman R correlation. To comment the correlation results authors considered that $r = 0$ indicates that there is no linear relationship between the variables; values of -1 or $+1$ variables are perfectly correlate; values between 0.1 and 0.29 small correlation; values from 0.3 to 0.49 medium and values of r between 0.50 to 1 have large relationship (Pallant, 2016, p.116).

Table 4. Spearman R Correlation – disaster funds

Statement S1									
S2	S3	S4	S5	S6	S7	S8	S9	S10	S11
0,26**	0,35**	0,43**	0,58**	0,36**	0,35*	0,35**	0,21*	0,27**	0,21*

Legend: * Correlation is significant at the 0.05 level (2-tailed).
 ** Correlation is significant at the 0.01 level (2-tailed).

Source: prepared by authors based on an empirical research results

The Spearman's R correlation findings showed that the medium and large correlation is expressed 60%, which improves relationships (Table 4). Medium correlation is expressed between statement 1 and statements 3, 4, 6, 7, and 8. The highest, large correlation between these two variables has been expressed between statement 1 and statement 5 which means that if all institutions dealing with pre-disaster tasks at different administrative levels of government had been fairly allocated with funds collected by fee from employed citizens that would have been followed by an increase value on the other variable. There are

four values with small relationship between those two variables. All correlation values have positive relationship between mentioned variables.

Once we compare the results of correlation analysis with the results of Ordered logit regression (Table 5) we can see that Ordered logit regression model improve our ability to predict outcome between variables in the model (statement 1 and set of statements from 2 to 11). The significance value is less than 0.05, so the model fit the data.

Table 5. Ordered logit regression – disaster funds

		Estimate	Std. Error	Sig.
Threshold	[S1 = 1]	2.380	.639	.000
	[S1 = 2]	3.839	.687	.000
	[S1 = 3]	4.692	.721	.000
	[S1 = 4]	6.541	.804	.000
	[S1 = 5]	10.362	1.306	.000
Location	S2	.006	.145	.964
	S3	.064	.175	.715
	S4	.446	.170	.009
	S5	.827	.153	.000
	S6	-.144	.173	.405
	S7	.148	.155	.340
	S8	.338	.206	.102
	S9	.077	.151	.611
	S10	-.081	.142	.566
	S11	-.265	.170	.118

Source: prepared by authors based on an empirical research results

Statistical analysis has confirmed causality between statement 1 (Disaster funds are adequately allocated for P&R institutions at your level of governance) and statement 4 (The disaster risk reduction policies have influenced authorized institutions to allocate the funds and to support projects for receiving funds), statement 5 (Respondents' institution has been fairly allocated with funds collected by fee (natural and other disasters) from employed citizens), from the survey's set of statements.

Professional and rescue professionals gave a higher rating for 4th statement that implies better causation score to the statement/hypothesis 1 in amount of 56%. Percentage impact between statements 4 and statement 1 obtained by calculating the exponential value of the estimate value for the specific statement that showed statistical significance in this study. Here we can conclude that protection and rescue professionals are neutral that the disaster risk reduction policies are influenced authorized institutions to allocate

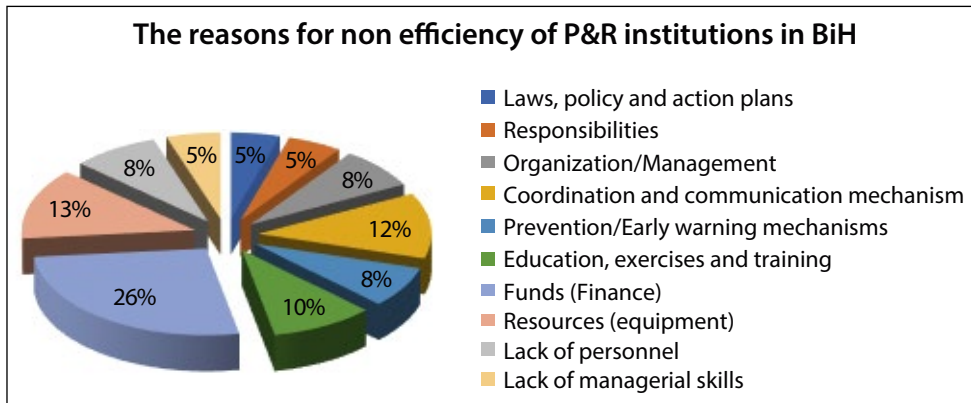
the funds and to support projects for receiving funds. If we compare means from descriptive statistic (3.03 for statement 1 and 3.08 for statement 4) we see very similar scores. This shows relationship between those two variables. The correlation analysis showed moderate positive relationship and significance at the 0.01 level (0.43).

Next causality within this model determined that respondents gave a higher rating for 5th statement that implies better causation score to the statement/hypothesis 1. This result is 2.28 times higher. Relationship between variables have strong positive correlation and significance at the 0.01 level with statement /hypothesis 1. Also, here we have neutral opinion that P&R institutions at different administrative levels has been fairly allocated with funds collected by fee (natural and other disasters) from employed citizens, there was recorded the highest strong positive correlation (0.58) between these two statements expressed at the 0.01 level of significance.

At the end of survey respondents were asked to write the main problem for non-efficiency of P&R organization/institution at their level of governance. Among the survey participants, 113 of 145 (78%) responded to this open-ended question. The survey participants differ widely in their responses by giving several opinions to this question and a summary of their responses is shown in figure 1.

Majority of participants (26%) indicate that lack of funds allocated to their emergency management organization have been identified as a main problem for non-efficiency of P&R organization/institution at their level of governance. For 13% of respondents, the lack of resources might be considered as a main problem of their institution but they connected this problem with inadequate allocation of required funds. The next group, which comprises as the third largest group of participants (12%), believe that the main problem for non-efficiency of P&R organization is due to not adequate communication and coordination mechanism while the lack of education, exercises and training is considered as fourth main problem identified by respondents. The respondents have been stated other main problems (responsibilities, organization, prevention/early warning, lack of personnel, and lack of skills) with involvement of less than 10%.

Figure 1. The main problem for non-efficiency of P&R organization/institution



Source: prepared by authors based on an empirical research results

Lastly, lack of funds was identified as an indirect generator of many other areas/problems for non-efficiency of P&R institutions at respondents' level of governance. Also, through the survey, P&R professionals from state and entity level stressed that donor programs need to be better monitored. Similarly, despite the organization for economic co-operation and development (OECD) recognized "importance of SAIs for development effectiveness, evidence shows that public sector auditing in a number of countries is the weakest component of Public Financial Management" (Organization for economic co-operation and development OECD, 2012) so the adequate planning of funds in the System of Planning, Programming, Budgeting and Budget Execution (SPPBI) framework budget document need to be improved. Once BiH faced with recent disasters it has not been adequate monitoring system of allocation and utilization of funds. BiH must adopt procedures of monitoring system of allocation and utilization of domestic and international funds in support of disaster relief. We are witnessing the problems about donation for migrant crisis in Bosnia and Herzegovina as well as sharing donations for COVID-19 as well.

During the COVID-19 pandemic in BiH, we have seen that there were a lot of accumulated funds in special accounts (special fee) for the protection and rescue. So, it is desirable to continue the practice of keeping these accounts, because BiH doesn't have a strong economy that can meet the needs of citizen/legal entities in crisis/disaster related to emergency procurement of necessary assets, equipment since it saves time and enables prompt delivery of equipment needed for the affected population, protection of property, etc. However, legal solutions, procedures, etc. has not been worked there. They should have been ready and approved, and activated and implemented in

times of crisis and emergency situations. Usually, the urgency of a situation dictates quick action, and mistakes can often occur, and ultimately those who need help the most suffer.

5. CONCLUSION

It is not possible to eliminate hazards, accidents and disasters but they should be constantly monitored and managed. Each stage of comprehensive emergency management model is important, however, if pre-disaster management is economic, efficient and effective the societies and countries are able to reduce and minimize the risks and potential impacts of hazards and disasters for citizens, goods and environment as well as prepare themselves to respond adequately.

At each stage of P&R management, it is very important to take into account the funds at disposition, and the adequate planning of funds in the Framework Budget Document, the Needs Plan and finally, the budget at all levels of government. It is necessary to make a plan for the joint procurement that could be supported by institutions at different levels of governance. The priority of acquisition has to be conducted at every level of government but institutions need to agree about comprehensive approach how to improve capacities and capabilities of P&R system in BiH. Also, Disaster funds should be adequately allocated to every administrative level of government in BiH for building capability of pre-disaster activities with the final aim to enable P&R system fully equipped with human, financial and other resources required to conduct efficient pre-disaster activities so as to be better prepared before disaster strikes. Additionally, an appropriate mechanism for tracing the resources allocated to pre-disaster management should be established. Moreover, P&R organizations needs to establish a mechanism to follow realization of funds related to the disaster management in order to avoid overlapping similar projects in the same municipality/area.

Given the overall elaboration conducted in the article we can say that main hypothesis assuming that "Disaster funds haven't adequately been allocated to every administrative level of government in BiH thus creating different capacities to cope with hazards/disasters" have been confirmed.

Additionally, the response to COVID-19 showed us that BiH institutions have not prepared legal and bylaw solutions, etc. which should be ready, approved, activated and implemented in times of crisis and emergency situations related to the urgent procurement of assets and equipment required for the protection of people and property. Once these solutions have been put in place, relevant organizations and institutions need to develop a performance measurement tools and systems to measure the activities and achievements.

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PRIMJENA KONCEPTA MEĐUNARODNOG STANDARDA VRHOVNIH REVIZIJSKIH INSTITUCIJA 5510 NA FINANCIRANJE UPRAVLJANJEM KATASTROFAMA U BOSNI I HERCEGOVINI

SAŽETAK RADA

Održivo, učinkovito i djelotvorno upravljanje zaštitom i spašavanjem prvenstveno ovisi o odgovarajućoj raspodjeli potrebnih financijskih sredstava kako bi se planiralo i djelovalo u slučaju očekivanih/neočekivanih opasnosti, rizika, nesreća i prirodnih i drugih katastrofa. Stoga, ovaj rad procjenjuje financiranje upravljanja katastrofama na različitim razinama vlasti u Bosni i Hercegovini. Istraživači su koristili Međunarodni standard vrhovnih revizijskih institucija 5510 - Revizija smanjenja rizika od katastrofa kako bi dobili odgovore koje su potom testirali Kruskal-Wallis, Mann-Whitney U, deskriptivnom statistikom, logit regresijom i Spearman R korelacijom. Nalazi su potvrdili da sredstva za katastrofe nisu adekvatno raspoređena na različite razine vlasti u Bosni i Hercegovini.

Ključne riječi: *financiranje, revizija učinka, upravljanje katastrofama, zaštita i spašavanje.*

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PROJECT STRUCTURE

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ABSTRACT

This paper deals with an important part of project development. The stages in the division of the project that enable its management in the best possible way are described. The division into phases also makes it easier to monitor the implementation of the project, checking the total workload. The role of the user is extremely important in starting a project. The user knows the business system of his company, has information about the characteristics, functionality and performance of the system, and sets requirements for the new IS that is being designed. The paper points out the fact that the user is the most important factor in the process of analyzing the business system, evaluating the developed IS project, and in the phase of introducing, a new IS.

Keywords: *project, project phases, project structure, planning, design*

1. INTRODUCTION

A person's life cycle begins with birth, childhood lasts until the age of 12. In that period, lifelong learning begins. The professional literature states that body growth usually lasts up to 30 years of age. The life cycle continues with maturity, in which period a person realizes his life needs on a business and family level. Can we make a comparison of the human life cycle with the project life cycle? The answer is self-evident, we can.

There are several definitions of project in the literature. We will mention some definitions:

- *Project is any set of related activities determined by the goal, descriptions and technical conditions that must be carried out using resources in a given time with limited availability of money to finance them. [1]*
- *As a set of mutually in a logical sequence related activities aimed at achieving the set goals in terms of time constraints. [2]*
- *Project is a goal-oriented, one-off, relatively new and complex intention, product or whole of interconnected activities whose duration is limited in time. The realization of activities is associated with the use of resources and high risk, so it requires the cooperation of various experts (teamwork) and special organization.*

2. STARTING THE PROJECT

Why are we starting a project? What are the reasons? Projects are started out of our desire to change or create something new. Because we want to change our environment, implement new technologies, new ideas, change processes, change the organizational structure, because we want to create a more pleasant atmosphere of work and life. Many organizations when thinking about starting a project make mistakes trying to paint too broadly the situation and problems that are happening in their environment. This is hard to resist, but nonetheless the project needs to be reduced to a specific problem that can be solved. The description of the problem should be the path to the intended solution.

Figure 1: Project structure



Practice shows that most of the difficulties and misunderstandings in design arise from the fact that the user is often unable to explain exactly what and why he is doing, or describe the existing system, and state what he wants or specify the requirements for a new IS. The user often knows only his narrow part of the job but has no insight into the mode of operation and the purpose of the existence of all the functions that IS affects.

The goal of this phase is to examine the feasibility of the project, decisions are made about who will be the project holder and whether the project will have the support of all entities involved in the project. At this stage, the future project manager makes proposals, the project sponsors evaluate the proposals and, after approval, start securing funding. The questions to be answered at this start-up stage are as follows:

- Why this project?
- Is it feasible?
- Who are the possible partners in this project?
- What will be the results of the project?
- What are the boundaries of the project, what are the limitations in relation to the environment, resources, time, money, etc.?
- Who are the beneficiaries of the project, in what way will he and benefit?
- How will the project fit into the organization's strategy?
- What human and financial resources are needed?
- What remains outside the scope of the project?

The project should start with a clear and accurate vision of how it will develop, when it will be completed and how to successfully lead the team towards the goal of completing the project. We need to be aware of the fact that project and project management should be aligned with business cycles, goals and time. The project must not be a mere implementation of new technologies, because the goal of the project is not the incorporation of technologies but a shift towards improving the process and organization of work. The project should bring improvement of product quality, increase profits, simplify business processes and the like.

At this stage, the most important T is to check whether the goals and results of the proposed project are in line with the strategic direction of the organization, or the environment in which the project will be implemented. Finally, if we are in the role of project proposer, our task is to propose projects that will benefit the organization to which we propose them.

2.1. PROJECT PLANNING

Planning is considered a central part of modern project management, so it is understandable that the literature mostly deals with planning methods and techniques that are presented through books, magazines, conferences and the work of professional organizations (White, Fortune, 2002). The generally accepted professional standards defined by the Project Management Institute (PMI) in its Project Management Body of Knowledge (PMBOK Guide) [3] emphasize the need to invest in project management processes and procedures, which support planning. (Dvir et al., 2003; Dvir, Lechler, 2004).

Planning is the process of understanding why an information system needs to be built and that a project needs to lead to a goal, by efficiently allocating resources. By planning, we want to ensure that the project does not exceed the deadlines within the planned costs. Also in this phase, a project team is being built that will cooperate in building the information system. This phase consists of two planning steps:

- 1. Project initiation** - how to reduce costs or increase revenues
- 2. Project management** - The project manager develops a business plan and introduces techniques that help the project team control the project throughout the life cycle of the system.

Once the project plan, which was developed in the project start-up phase, is approved, the project enters the second phase: the planning phase. We can say that planning is the foundation for successful business in all aspects of business. Planning shapes the business environment and encompasses goals and ways to achieve those goals. The plan should include the planning structure, resources, costs and time required to complete the project. Planning is an unavoidable process in project development, at this stage management must be involved because it provides guidance and support in project development.

Figure 2: Project planning



The structure of the project implies activity on the project and focus on the project objectives, from the initial to the final phase of the project, the phase of closing and ending the project.

- In time planning, the basic intention is that the project does not have major deviations from the set deadlines, ie that all phases of the life cycle take place within the scheduled deadlines. It is extremely import-

ant to adhere to the set deadlines throughout the project, because any deviation can jeopardize the completion of the project and negatively affect the morale of project team members, as well as the business entity as a whole.

- Costs as a planning factor play an important role in project development. This section provides reports on cost flows during project implementation.
- The human resources management function is important for the coordination of human resources during project implementation, with the ultimate goal of quality project completion.

The planning determines the business objectives, analyzes the existing business organization, and lists the business processes and data classes, which are used in the business system. The stages of project planning are determined by the business system and depend on its characteristics. Exploring the link between project planning and project success, viewed from a different perspective, Dvir et al. (2003). Found that there is a significant positive relationship between the extent of the effort put into defining the project objectives and the functional requirements and technical specifications of the product, in relation to the success of the project, especially from the end user perspective. That is why the participation of the customer or end user in the planning phase is crucial. Finally, we will define the most important steps in planning:

- Setting business goals
- Defining the project
- Prioritization
- Feasibility study
- Development of a work plan
- Defining resources.

2.2. PROJECT DESIGN

In this phase, decisions are made on how the system will function in terms of hardware, software and network infrastructure, how user interfaces will be designed, how these forms and reports will be used. This phase also defines the design of the program, the database as an organized set of data and the files as separate file systems, which will need to be designed.

The design phase has four steps:

- 1. Strategic design** - decisions are made whether the system will be developed within a company or outside it? In this step, it is important to keep the future in mind and anticipate future challenges.

- 2. Architecture design** - describes the hardware, software and network infrastructure that will be used.
- 3. Database and file characteristics** - these documents determine which data and where it will be stored.
- 4. Program design** - defines which programs should be written, what they will do.

It is possible to notice that clearly set project goals, quality design preparation and planning documents significantly contribute to the realization of the project in the planned time, within the budget and customer satisfaction with the final product / service (Dvir et al., 2003; Wohlin, Andrews, 2003). In the design phase, one or more plans can be developed, with which it is desired to achieve a more successful project result. Depending on the project topic, project phase products may include diagrams, sketches, flow charts, site trees, HTML projects, prototypes, and UML schemas. Project managers use these blueprints to select the final design to be implemented in the project. Once the design is selected, changes at a later stage of the project are not recommended. Therefore, it is important to anticipate possible extensions and upgrades in the next design phases.

2.3. PROJECT CONSTRUCTION

During the construction phase, everything that will be needed to implement the project is arranged. Necessary suppliers or subcontractors are entered, a schedule is made, materials and tools have been ordered, instructions have been given to staff, etc. It is important to note that in the construction phase we include:

- **Building a database** (software construction intended for storing, analyzing and searching a group of related data). [4]

Klasić and Klarin in their work (2003) [11] state that data administration tasks are included in almost all phases of project development. Data administration in the phase of maintenance and use of the database becomes the basis of reverse engineering, in the reconstruction of the existing and construction of a new information system. All requests for additions and changes to existing applications should be submitted to the database administrator for a particular database management system, in order to align new data structures with existing ones and control the information standards accepted in the enterprise information system.

- **Programming a process** (a heuristic / thought process by which we arrive at a solution to a problem or group of problems, using an algorithm or formal logic, with the irreplaceable use of a computer). [10]

- **Testing** (individual programs are tested, with the participation of system users which can be of great help in detecting vulnerabilities). In addition to testing in laboratory conditions, testing should also start testing in real working conditions. Of course, let us not forget that testing is done throughout the project construction life cycle. It is even desirable to run parallel work on the new and old mode for a while in order to compare and check all the functionalities. Klasić and Klarin in their work (2003) [11] state that the time of parallel work must be sufficient to identify possible shortcomings that were missed in previous testing and to repair them, as well as to "run in" employees to work with the new system.
- **Integration** - the project is integrated into the existing or implemented in the new structure of the information system.

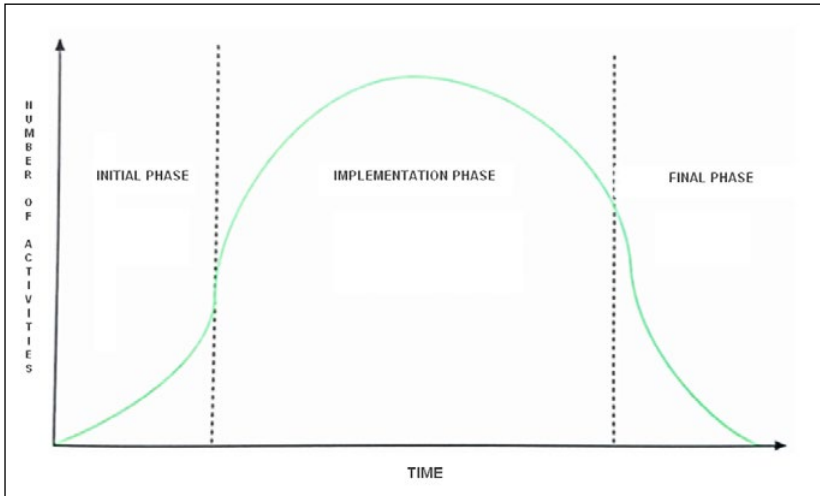
The construction phase is completed when the implementation phase begins.

2.4. PROJECT IMPLEMENTATION

Implementation or introduction of the project in implementation - is the phase of unification of individual programs (subsystems) into a single information system. At this stage of the project, we identify several steps that need to be prepared. One of these steps is training or educating users. Depending on the size of the system, we can use project team members or developers to educate users. In large systems, a group of users should be formed to transfer knowledge, so that over time they can provide education to their users. The next step is to update the database where we can use the user or move data from the existing system, or perform data migration (Data migration is the process of transferring data between two systems, which includes at least two databases - the source system and the new destination. The concept of migration sounds simple, many equate migration with data replication, ie copying data to one, but in practice migration is much more complex because it involves the transfer of data from one data model to another, new, different model with many additional requirements and changes over data). [9]

The work on the system documentation is completed and instructions for the user are prepared, the takeover report is signed and after that the official implementation of the project begins.

Figure 3: Project life cycle based on activity and time



Source: Šimović, V., Zovko, V., Bobera, D. (2011): "Baltazar Adam Krčelić", Zaprešić, p. 34

3. REVISION, CLOSURE AND COMPLETION OF THE PROJECT

We will try in this chapter to answer the question, why an audit? The word revision is derived from the Latin word "revidere" which means "to see again", and therefore revision is "a subsequent review and review of processes and conditions".

Audit is, in the broadest sense, the process of examining the accuracy, completeness, credibility, legality and objectivity of certain phenomena and processes. In order for the audit to be successful, the following conditions must be met:

- Verification of project results - comparison with planned results,
- determining the degree of achievement of goals, both known and hidden,
- the audit report should contain a detailed description of the current situation,
- the auditor has a great responsibility in performing this duty,
- responsibility is reflected in the trust he must gain in team members, in order to successfully conduct an audit,
- The auditor should be a confidential, conscientious, honest and responsible person.
- Project audit seeks to capture the core of the positive and negative consequences of a project, with the ultimate purpose of better performing future projects.

- The audit must be carried out at each stage of the project implementation, and not only at the end.
- The audit is primarily carried out to prevent possible adverse effects on the project objectives.
- The main goal is to identify problems and their impact on project performance, costs and deadlines.

Audit, ie verification of the success of information systems according to Spremic. M and Panian Ž (2007) [8] most often refer to the following areas:

- 1. Checking the functionality of information systems** - whether all parts work information systems (hardware, software, network, orgware, lifeware, dataware) in a correct and prescribed manner and whether the underlying business transactions are carried out in accordance with expectations.
- 2. Checking the reliability of information systems** - whether all parts of the system and the whole reliable for use, ie whether their use exposes users, owners or other 'involved' parties to some risk.
- 3. Checking the security of information systems** - whether and what is the level of security risks of using information systems and what is their effect on business.
- 4. Checking the efficiency and effectiveness of the use of information systems** - can information systems be used in a more efficient, cheaper or more efficient way? Do they exist ways to improve the profitability of IT investments, how effective they are information systems with regard to business needs.
- 5. Checking the quality of information systems management and their impact on business** - the extent to which organizational and management methods and techniques are used in the management of an information system appropriate to the requirements of the business.
- 6. Checking the compliance of the use of information systems with the applicable regulations, standards and internationally recognized frameworks** - whether the use of information systems and all its parts is in accordance with applicable regulations, international frameworks, norms and professional standards.

The most common reason for conducting an information systems audit is regulatory requirements, ie regulatory 'pressure' and obligations. In this case, we are talking about the regulatory audit of information systems, which should be carried out in almost all countries of the world, especially in the banking and financial sector. In Croatia, the CNB (Croatian National Bank) has prescribed a framework and obligation to conduct internal and external audits

of information systems (Decision on Appropriate Management of Information Systems of 17 July 2007). This decision also prescribes in detail the areas of verification, which also adopted a framework for audits of information systems in financial institutions (banks):

- information system management framework,
- information system risk management,
- internal audit of the information system,
- information system security,
- maintenance of information system,
- business continuity management,
- information system development and externalization,
- Electronic banking.

In general, the regulatory framework for the implementation of information systems audit in the Republic of Croatia consists of the following 18 areas:

1. Information security and information system management
2. Risk management related to information systems
3. Management of physical and logical access controls
4. Information system asset management
5. Management of operational and system records
6. Reserve management on storage
7. Relationship management with service providers
8. Relationship management with equipment suppliers
9. Management of information system development
10. Physical security management
11. Password management
12. Configuration Management
13. Change management
14. Business Continuity Planning
15. Recovery plan in case of disaster, unwanted and unforeseen events
16. Incident and problem management
17. Malicious code protection
18. Application of internal acts related to the information system

Identifying project goals is relatively easy, as is their relationship to the organization's goals, if the project is well managed. Nikitović, M. (2009) [5] in his script *Project Management and Documentation* says that the factors that project managers consider key to the success of projects and to which the audit must pay special attention are:

- Project efficiency - is measured by low or no deviation from the budget and the set time limit,

- Customer satisfaction - is measured in terms of technical tasks, but also to meet customer needs,
- Business success - is measured by the level of commercial success, and share in the target market,
- Quality and other objective parameters of the project,
- Future potential - the most difficult to quantify and refers to future markets, new product lines, new technologies as direct consequences of the completed project.

A project audit can be performed on the project in whole or in part. Unlike permanent, regular weekly / monthly inspections, the project is audited every two to three months (on projects lasting two to five years), in order to see the situation, ie to reveal possible problems on the project that are not recognized in the regular reports.

There are three types of project audit:

- **Project cost-effectiveness audit** - checks the input and output data on which the economic cost-effectiveness of the project was done in the planning phase and compares them with the situation at the end of the project;
- **Internal audit** - makes a control check of the project by the management; on behalf of management, this control is performed by an independent auditor, even the project team itself;
- **Final project audit** - or post-implementation audit, analyzes the actual success of the project.

Nikitović, M. (2009) in his script Project Management and Documentation states that the audit is most often performed at three different levels:

- **general audit** - a brief overview of the above points and their coordination among project stakeholders
- **detailed audit** - a detailed analysis of the above points, but without identifying technical problems
- **technical audit** - is performed by technical experts under the supervision of an auditor, and it is also the most detailed.

After the audit, an audit report is written, which must be written in a pre-defined form. The report should include the following:

- give a comparison between planned and achieved results and deviations from planned values,
- it should be written as positively as possible, ie warn of mistakes that can be corrected,

- necessarily maintain objectivity and professionalism,
- present only information and topics relevant to the project.

Completion of the project includes formal verification and acceptance of the project product, thus terminating the project activities. In this phase, as the last phase of the project, the research is completed, the initial problems are solved and the implementation is completed. The client shows his satisfaction or dissatisfaction. Members of the project team continue their activities on some other jobs or projects.

The project completion process should result in certain values for the organization implementing the project:

- improving understanding of how all projects can benefit the organization,
- improving the process of project management and organization,
- creating a work-friendly environment in which project team members are enabled to maximize their own ability,
- identification of organizational strengths and weaknesses related to project management,
- identification of risk factors that occur during project implementation,
- improving the capacity of project team members and their contribution to organizational goals,
- Identification key of people who are real human resources for the organization.

There are several reasons for the completion of the project, Nikitović, M. (2009) [5] mentions these five reasons:

- **Reasons related to business strategy:**
 - the project is no longer consistent with the organization's objectives
 - new achievements have made the project unnecessary or uncompetitive
 - endangers the current business of the organization
- **Client reasons:**
 - the client no longer wants the project
 - the client's new wishes require too much modification
 - the client does not think that the project will experience commercial success.
- **Technical reasons:**
 - changes in the environment make the project unfeasible
 - the experiments that were performed failed
 - cannot be reported without major modifications in existing technology
- **Management reasons:**
 - Lack of support for project implementation
 - inconsistency with the financial capabilities of the organization

- better realization of the project outside the organization
- anticipated funds and resources can be better used
- **Reasons for project management:**
 - costs are outside the budget
 - feasibility is outside the planned deadlines
 - the quality of the project result is low
 - the requirements for modifications are too high
 - project management is poor
 - there was no support from the organization in which the project is implemented.

After the reasons mentioned above, a decision on the completion of the project should be made. It is not easy to decide, however there is a list of useful questions that can help in deciding that the project can be completed.

- Is the project still consistent with the organization's goals?
- Is the top management convinced of the successful implementation of such a project?
- Is the project implementation within the budget framework?
- Does the project have the support of all departments?
- Is the project team still innovative?
- Can new knowledge be protected as patents, trade secrets and the like?
- Can potential results be achieved more efficiently outside the company?
- Does the output of the project still give positive results of the cost-benefit analysis? (...)

Table 1: List of critical factors for project success by relevance

1.	Project vision	Initially, clearly set goals that are measurable and indicate the direction of action
2.	Top management support	The will and commitment of top management to provide resources and authority to implement the project
3.	Regular consultations with the client	Constant communication and active listening of the involved and interested parties
4.	Employee commitment to the project	Recruitment, selection and training of necessary people
5.	Technical features	Availability of required technology and expertise
6.	Acceptance by the client	The act of selling the final project product to the intended buyer
7.	Monitoring and feedback	Time-aligned information at all stages of project implementation
8.	Communication	Adequate communication networking of all stakeholders, until the end of the project
9.	Determining and solving problems	Ability to deal with unexpected crises and deviations from the planned

A project can experience success or failure if during the life of the project, if the project organization is not consistent, because the organization is not designed or suitable for the project, if there is insufficient management support, if resources are not provided and if there is poor coordination between departments. The placement of the wrong person in the position of project manager can also be an indicator, especially if that person does not have enough experience. Another indicator may be poor or insufficient planning, due to the speed of planning, in the desire to complete the project as soon as possible.

Table 2: Performance statistics

CHAOS RESOLUTION BY PROJECT SIZE			
	SUCCESSFUL	CHALLENGED	FAILED
Grand	2%	7%	17%
Large	6%	17%	24%
Medium	9%	26%	31%
Moderate	21%	32%	17%

Source: <https://www.infoq.com/articles/standish-chaos-2015>

The project completion process is divided into two separate parts:

- decision whether the project should be completed
- if a decision on completion has been made, the determination to implement it

Models of support for decision-making on the completion of the project are divided into two categories:

- models based on the degree of fulfillment of factors that are generally accepted as success factors,
- models based on the degree of project completion, set general and specific objectives.

After the completion of the project, it is necessary to create a knowledge base, the skeleton of that memory is the final report of the project. The key reasons for preparing the final report are:

- benefits the project manager to improve his skills
- organization to increase its intellectual capital - acquired knowledge
- project management in order to improve the success of management and leadership of future projects.

It is mandatory to inform all workers that the project is over, for the following basic reasons:

- to warn all people in the organization that the project results are now available to everyone,
- to inform all people who participated in the project that the project has been completed and with satisfactory results,
- If the project was small, there is a possibility that not everyone in the organization knows it is over.

The final report should have the consent of the sponsor and the beneficiary that the project has been delivered and complies with the initially defined specifications. The final report is adopted by the project management committee and after adoption, the project formally ceases to exist.

4. CONCLUSION

Analyzing activities, technical conditions, technology development and our need to always strive for a better and more organized system in general, this paper presents the sequence of stages in process modeling and information systems design, to avoid user errors in project planning. Many questions were asked and analyzed and all questions were answered. It can be concluded that each project should bring an increase in profits, quality of products and services, simplify business processes and organization within business systems. If this work has contributed to this, then it is the mutual success of the designers and authors.

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STRUKTURA PROJEKTA

SAŽETAK RADA

U ovom radu obrađen je važan dio u izradi projekta. Opisane su faze u dijeljenju projekta koje omogućuje njegovo vođenje na najbolji mogući način. Podjela na faze također omogućuje lakše praćenje realizacije projekta, provjeru ukupnog radnog opterećenja. Izuzetno je važno u pokretanju projekta uloga korisnika. Korisnik poznaje poslovni sustav svog poduzeća, posjeduje informacije o karakteristikama, funkcionalnosti i performansama tog sustava, te postavlja zahtjeve za novim IS-om koji se projektira. U radu je ukazano na činjenicu da je korisnik najvažniji faktor u procesu analize poslovnog sustava, vrednovanja izrađenog projekta IS-a, te u fazi uvođenja novog IS-a.

***Ključne riječi:** projekt, faze projekta, struktura projekta, planiranje, dizajn*

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