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Genesis and Sources of Pragmatic Identification of Cooperation on the Example of Team Sports

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* 1. Introduction

Contemporary team sports are characterized by a high degree of dynamic, organizing the actions of players who effectively achieve the goals of the game by using absolutely dependent actions, in variants and combinations with two or three players, and they effectively facilitate their implementation by using relatively dependent actions with the participation of others team players. The effectiveness of the use of interdependent actions in a team sport depends on the level of cooperation of players, and thus on the manifested synergy (Panfil, 2012). Cooperation allows the achievement of goals that individual players would not be able to achieve, and its use increases the chance of their effective competition. Only the effective use of cooperation processes allows for success in contemporary team sports. During the process of training the skills of players, it is recommended to pay special attention to the effectiveness of cooperation.

In order to be able to make a detailed analysis of the cooperation process, it is necessary to refer to the concepts and scientific disciplines that will explain this phenomenon, which has its source in the humanities (history, sociology, etc.) and mathematical and natural sciences (biology, physics, etc.). The analysis of phenomena and processes

occurring among people, animals, plants and nature allows for a deeper understanding of the essence of cooperation, getting to know its genesis and allows you to pay attention to its invaluable value in team sports.

2. Basic concepts used to identify cooperation

The basic concept that underlies the identification of cooperation is "feedback". Cybernetics, which is the science of control systems as well as information processing and transmission (Mazur, 1999), explains feedback as the influence of an output system's signals on its input signals. The system or system receives information about its actions, which may be perceived as strengthening or weakening that system. When they are strengthened, it is referred to as positive feedback, and if they weaken, then it is negative (Chabłowski and Skulimowski, 1978).

When transferring this concept to the process of cooperation in team sports, a certain dependency is noticeable, because in a game, the actions of one player always cause the actions of a teammate, which are some kind of information for the former, which causes either the continuation of this action, interruption or correction of this action. Positive feedback occurs when the player's response to

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→ the signal sent by the partner will positively affect the so-called input action, which means it will then reinforce it. Negative feedback will occur when the player's response to the signal sent by the partner will negatively affect his input, which means that it will then weaken it.

The interaction between the players can be perceived as a feedback, but this feedback is the result of a cognitive and affective message, which is a kind of "feedback". Feedback is translated as feedback provided to the so-called person. "Generator", from the person to whom this information was directed, about the efficiency and effectiveness of its operation (Hattie and Timperley, 2007). Feedback is information that can be shared through various communication channels (verbal and non-verbal). In sports teams, especially when playing, non-verbalism dominates. Cooperation is based on feedback. In a situation where two players are interacting with each other, the player's action is always feedback to the teammate and allows for an appropriate reaction in this action. Appropriate feedback allows the action to be corrected, continued or interrupted.

The definition of feedback shows that communication is the basis of its effectiveness. Social communication is the process of producing, transforming and transferring information between individuals, groups and social organizations (Antoszewski and Herbut, 1995). Communication has emerged and exists as long as humanity exists. Interactions, relationships, bonds, could not exist if people did not communicate with each other. Łasiński (2000) in his work presented the value and essence of communication, indicated the characteristic features of the communication model, and described its extremely important role in everyday life. Scientists most often divide communication into three basic types: verbal communication, non-verbal communication and proprioceptive communication. Verbal communication takes place thanks to the language of communication. Language is the primary source of verbal communication. Thanks to it, the meanings of communi-

cating ideas and feelings are expressed on the condition that sounds and symbols are understood by all participants of the communication process (Dobek-Ostrowska, 1999). Non-verbal communication is the way people communicate, whether intentionally or unintentionally, without words; non-verbal indicators include facial expressions, tone of voice, gestures, body positions and movements, touch, and gazing (Aronson, Wilson and Akert, 1997). In the process of communication, both of these forms occur simultaneously. One cannot be separated from the other. There are many functions that communication performs in the context of group cooperation. In a sports team, communication enables the flow of information, influence, imitation and cooperation. Of course, it plays a major role in establishing contacts between team members, establishing a method of operation or comparing the concept of cooperation. When participating in the game, the communication process is difficult due to the fast pace of the game and the inability to discuss, discuss strategies, etc. Sports teams are forced to create their own effective communication systems in order to be able to make corrections in the coordination of activities in a short time (Reimer, Park and Hinsz, 2006).

Interactions are the main condition for communication between players during the game, especially non-verbal. Interactions are defined as the mutual interaction of partners, consisting in the fact that at a certain time the behavior of one person becomes a set of stimuli for another person, to which he reacts. In turn, her reactions are a set of stimuli for the first person who reacts to them. These reactions, being stimuli for the partner, provoke his next reactions, etc., until this process of exchange of stimuli and reactions is not interrupted (Mika, 1972). In the case of people, interactions always take place, the condition is, of course, the presence of at least two people. There need not be physical or verbal contact between them, but the actions of one always influences the actions of the other.

The occurrence of interactions between people of varying intensity causes the formation of inter-

personal relations, defined by sociologists as a relationship between people, related mainly to the interactions of feelings and attitudes towards each other. The main feature of relationships is that the interactions that occur are repetitive and regular. Relationships are a kind of scheme within which many mutually oriented activities take place (Sztompka, 2002). It is also worth adding that in relations there are not only interactions of the same type, but on the contrary, there are very diverse, multi-thematic interactions (Sztompka, 2002). Relationships can therefore be defined as a more advanced form of interactions that occur between people.

When relationships between individuals are “strong” and continue over an extended period of time, a situation can arise where the relationship develops into a social bond. Social bond is defined as all social relations binding group members in a given set of people and attitudes of members of this set to the group as a whole (Turowski, 2001). When group members have a similar value system, express similar attitudes and agree with the rules that apply in a given group, then they are able to work effectively for a common goal. Groups in which there are “strong” social bonds show high effectiveness of actions. The social bond, strong and true, is twofold: it consists in a joint attitude to the world of values, expressed in the same or similar behaviors and actions, and it consists in an organization in which the roles and tasks assigned to individual individuals and groups complement each other (Rybicki, 1979).

3. The genesis of interpersonal interactions and their similarity in the natural world

It should be noted that phenomena such as interactions, influences, relationships and bonds affect not only people, but their presence is also noticeable in biology (and other fields such as pharmacology, computer science). Interaction (according to the dictionary of the Polish language) is the mutual interaction of people, objects or phenomena. Bi-

ology is an example where the occurrence of various types of interaction is very similar to that of people and social groups, including sports teams (i.e. social interactions).

Interspecies interactions are all kinds of interactions and relationships that occur between individuals of different species living in the same environment. There are two types of such interactions in nature and they are: interactions of an antagonistic nature, including competition and parasitism and predation, and non-antagonistic (cooperative) interactions, which include symbiosis (and its variants).

Antagonistic interactions are interactions that adversely affect one or more of the populations between them. Competition is a type of interaction where, two or more populations living in the same environment compete for the same limited environmental resources (e.g. food) and both of them suffer losses as a result. Competitive interactions are divided into: intra-species competition and interspecies competition. An example of this intraspecific is, for example, the competition of trees in forests, where the same species competes for the same resources, such as: access to light, water or minerals. An example of interspecific competition may be the fight for the same food among two different species of rodents, or e.g. insects from the caterpillars family, which are equipped with special mandibles for the removal of other species of larvae attacked by caterpillars, etc. (Mackenzie, Ball and Virdee, 2007). This type of interaction can be very well transferred to the “ground” of team sports, because competition occurs in all kinds of games between opposing teams, where each side is fighting for victory. Competition also occurs „inside” the team, because players who play the same role in the game in the team also compete to participate in the team’s basic line-up during matches played.

Another type of interactions occurring in biology is parasitism, which is defined as a kind of coexistence of two individuals in a population where only one of them benefits (at the expense of the



other) and the other suffers damage. Parasitism is defined as a relationship between two organisms, with a reciprocal influence, where one of them is a host and the other a parasite, and the former is a partial source of food for the latter (Pojmańska, 2005). However, also in this case there is some kind of cooperation, because the life of the parasite depends on the life and health of its host, therefore the parasite always keeps its host alive.

Another type of interaction is predation, where one organism kills the other, most often to get food (lion and antelope, mouse hawk, etc.).

Cooperation is a process where at least two players work together for a specific goal that neither of them could achieve individually. Hence, cooperation can be defined as an example of non-antagonistic or cooperative biological interactions. One of these interactions is symbiosis, which is the close co-existence of at least two species of organisms for the benefit of both or one of them. The process is that the two organisms work together to make them survive, which is their primary goal. Therefore, they have a common goal that they strive for, which is a reflection of the different types of cooperation between partners in team games.

Observation of the cooperative and competitive behavior of various animal and plant populations is an inspiration to identify the cooperation of players in team games and allows to explain further, more complex types of this interaction. During sports rivalry between two teams, we can designate two types of interdependent actions and they are: mutually dependent actions in the offensive and mutually dependent actions in the defense. It turns out that similar types of behavior also occur in the lives of various animal species.

An example of interdependent offensive behavior is a pack of wolves — defined as a group of these animals, with a specific internal hierarchy, strongly associated socially and showing territorialism. A pack of wolves can attack individuals larger than themselves, using various tactics in order to confuse (surprise) the victim. The most common tac-

tic of such a hunt is to drive your “victim” to a place that prevents escape, surroundings and attack from various sides. Wolves can interact in a very organized manner during hunting, and each of them has a specific function. The cooperation of the entire pack allows you to successfully attack the victim and obtain food (Wierzbowska, 2010). In a team sport, performing all kinds of offensive combinations also involves performing certain actions of each of the players who take part in that combination for a common purpose. Each of the participants who takes part in the created combination must take a given action in the right way and at the right time, so that the combination can be effective. Just like with wolves, only joint action can bring the desired effect (i.e. getting food), and in sports teams, joint action can bring about scoring a point, goal, etc.

An example of mutually dependent defensive actions will be a shoal of fish — translated as a temporary group of fish swimming together in order to increase safety and provide food. Shoals of fish are dynamic collections of different species that interact with limited perception. Small-sized fish, which could quickly become predators on their own, form into shoals of several to a million individuals. By swimming together, they increase their chances of survival by making circles and changing directions of movement. The shoal of fish, interacting with each other, forms one whole, has a holistic effect, makes it visible as one organism, which gives it an advantage over a stronger predator.

4. *Fight as a regulator of social interactions*

In sports competition between two teams, offensive and defensive cooperation systems are used for a specific purpose. The main goal of sports teams during the game is to win, which involves defeating an opponent who is trying to oppose it and also aims to win. In team games, a struggle for victory, which is a regulator of social interactions.

The fight is translated by the dictionary of the Polish language as a clash of armed groups and units, organized action of the armed forces to defeat the enemy. However, the fight has its genesis from the beginning of the existence of living organisms, because biological competition for limited access to resources forced the necessity to compete in order to survive. Fighting has been a way of gaining resources and a method of defense against losing them. The armed struggles that emerged with the development of civilization and technology were organized in various dimensions, local (battles, skirmishes), but also global (wars). Armed fighting was a way of resolving interpersonal conflicts and was aimed at eliminating the enemy (opponent).

The elements of working together in groups and teams to “eliminate” the opponent have been used in most of the historic battles that have taken place over the centuries. “Today’s” teams then formed all kinds of armies, battalions and other military formations. History shows that over thousands of years, armed struggle has used a variety of tactics and strategies based on cooperation to achieve the goals of powers and states. It turns out that the elements of war tactics did not differ much from today’s “fights” that take place today in sports arenas, as part of team sports games. Surprise with action, concentration of forces in one place and cooperation between the formations are elements that sports teams have in some way “transferred” from the art of war and are used to defeat the opponent.

The armed struggles fought over the years meant that their tactics were developed. Each of the army leaders had to wisely and skillfully use their military units to win and suffer minimal losses. The basis was also the efficient cooperation of military formations in such a way that it would bring the desired result. The armed forces used various forms of combat to surprise the enemy and inflict losses on him. One of them was the concentration of forces in one place.

The concentration of forces consisted in gather-

ing the largest number of troops in a given territory. Thanks to this, the armies could attack the enemy with all their strength, using the advantage of numbers and strength of attack, which, in the event of not using the appropriate defense in the event of such tactics, could result in a quick defeat and severe losses and, as a result, defeat. Concentration of forces was used both in ancient battles, e.g. among the armies of the Roman Empire, but also later by Napoleon’s army or the armies of the Axis during World War II. The art of war of the ancient Romans was a very large concentration of troops and the right positioning, thanks to the skill of the legionnaires and discipline of the troops, the army pressed against the enemy, trying to break the center of the formation and thus discourage the enemy from further fighting. Napoleon Bonaparte during the battles in the Prussian campaign (1806), he wanted the army to concentrate very quickly in one place (Bielecki, 2001). Concentration of forces in addition to dealing quickly with the enemy, had one more important goal, and it was the economization of forces, thanks to which it was possible to move to the next fights in a short time, without much energy loss. Another example is the concentration of military forces of the Third Reich on the Polish border, where the goal of the nearly 2 million army was to attack Poland with the greatest possible force, practically from all directions, and to quickly seize the capital, which meant a complete takeover of the state.

A very good example showing how strongly the cooperation between ancient Roman legionnaires was developed, were the famous military formations used by them. The formation of the so-called turtle, requiring the cooperation of one group, was to defend against the attack of archers. Another formation was the so-called triple formation, which organized the setting up of Roman legion units, put up to fight the enemy. Thanks to this, the Romans were able, within their legion, to organize themselves very quickly and change their position, and to use the appropriate type of formation. Proper positioning allowed for quick movement of mil-



itary units among themselves and attacking according to the assumed plan (Cowan, 2010).

The main goal of the team during the fight is to surprise the opponent. Surprise always causes chaos and destabilization in the actions of the opponent, and thus makes it impossible to effectively defend against the opponent's offensive. In historic armed struggles, the surprise of the opposing army guaranteed the final success. An example from ancient history can be the Battle of Cannae (216 BC), where Hannibal's barbarian army, despite the smaller numbers, was won by the Roman army thanks to excellent tactics and the surprise effect. Hannibal, expecting the Romans' war tactics, used a maneuver where, by giving the impression of a defeat (the troops in the center of the battle began to retreat), the Romans were caught in a trap, and surrounded by the enemy, they suffered a very severe defeat (Healy, 2010). Another example is the Battle of Warsaw, where (1920), where the Bolshevik army was arrested by the Poles, by an outflanking counterattack by the army led by Józef Piłsudski, from the Wieprz River on the concentrated Russians on the outskirts of Warsaw. Another example of a surprise effect was the use of a maneuver by King Władysław Jagiełło, where the so-called light cavalry, struck the Teutonic Knights' army at the right moment, encircling them and decisive for victory in the Battle of Grunwald (07/15/1410; Nadolski, 2010).

Fight, which is not a product of civilization development, but a part of nature, has practically always existed. Its purpose has always been to obtain resources and to defend against their loss, conquer territory and ensure security. Fight has changed over the centuries, initially using your own body, then primitive tools, and with the continuous development of mankind, more and more advanced weapons and technologies. The development of mankind also caused that among people gathered in larger groups, tribes, there was a need to structure power and greater control over natural resources and territory. As a result, a new type of fight arose — armed combat. Armed combats, car-

ried out in the form of wars or revolutions, were a way of resolving all kinds of interpersonal conflicts.

With time, however, by introducing religious and legal rules, organic fights were transformed into social fight, and this one into social game. The game was therefore to be a regulator of social interactions and to resolve conflicts. The primary goal of social games is to gain access to various types of "resources" within a time frame. Therefore, a social game is a contemporary regulator of interactions, with flexible rules that should be followed by its participants, supervised by independent judges. Games have become a way of resolving conflicts by showing (according to the rules) superiority over the opponent and thus gaining temporary access to various types of resources. The game does not resolve conflicts definitively, but temporarily, because the opponent usually (according to the rules) has the right to rematch and re-demonstrate his advantage (understood as better performance in the game) over his opponent (Panfil, 2012).

5. Team sports as a regulator of social interactions (on the example of volleyball)

Team sports is defined as a set of skills of action and cooperation in the offensive, counteracting and cooperation the defensive of game participants who compete in accordance with the adopted rules and strive to achieve uncertain individual, common and opposing goals (Panfil, 2006). By achieving the goals of the game, privileged access to resources (material and non-material such as prestige, favor, etc.) is obtained (for a certain period of time). During a team sport, there are elements of cooperation, where the participants, through the use of various types of variants and combinations with two or three players, effectively achieve the goals of the game (Panfil, 2012). Cooperation during offensive situations in a team game is mainly carried out by creating point situations with the use of position changes and passing both to free space and to a specific place.

Contemporary team sports are characterized by a high degree of dynamic, organizing the actions of players who effectively achieve the goals of the game by using absolutely dependent actions, in variants and combinations with two or three players, and they effectively facilitate their implementation by using relatively dependent actions with the participation of others team players. The effectiveness of the use of interdependent actions in a team sport depends on the level of cooperation of players, and thus on the manifested synergy.

The organization of the game of sports teams is determined by time and spatial dependencies, which is defined as synchronizing the activities of partners and coordinating activities. By implementing the process of cooperation at the highest level of synchronization and coordination, players create a new quality that enables the achievement of the goals of the game. The perception of the significant influence of these two elements must be regarded as a new quality, as the cooperating players have an individual input in achieving a certain goal that cannot be defined. Therefore, cooperation should always be perceived through the prism of these two fundamental elements, which are: coordination and synchronization, because the reasons for effective cooperation lie precisely in them, and not in the activities themselves (Panfil, 2012). In the game there is a division of actions into relatively and absolutely dependent on a partner (Panfil, 2006). Relatively dependent actions are all individual actions with and against the ball, where the achievement of the goal is not dependent on teammates, but can only facilitate these actions by assisting. Absolutely dependent actions are the interaction of two or three players with and against the ball, the presence of which is necessary to resolve the situation and achieve the goal.

The cooperation is carried out in combinations or variants of playing with the ball or against the ball, by two or three players, whose actions are absolutely mutually dependent. Cooperation processes included in the organizational effects, in combination with the facilitating effects, they cre-

ate the so-called synergistic effects. Organizational effects in team sports are understood as coordinated and synchronized absolute dependent actions, which cannot be considered in isolation, but due to their structure and purpose, must be regarded as a new quality. Panfil (2012) distinguished several types of synergistic effects that enable the achievement of game goals. In offensive situations, these are:

- effects of simultaneous execution — (realized by two players), i.e. those where players perform actions simultaneously. An example of a volleyball will be performing a 1 tempo combination, where one of the players jumps up, the other at this time passes the ball to him in one of the ways, followed by an attack (by hitting).
- pre-execution effects — (implemented by two players), i.e. those where one player performs an action that will cause the other to act. An example of a volleyball will be the performance of a “shifted 1 tempo” combination, where one of the players performs a pass into a free space, where the other player moves towards this place, performs a jump, and attack with one of the methods permitted by rules.
- pre-emptive execution effects — (performed by three players), i.e. where one of the players performs an action, and this will cause two teammates to act simultaneously. Transferring this, for example, to volleyball, where the ball is played very quickly, these will be all combinations with the use of attack line players, i.e. a combination of the “left attack with 1 tempo” →

- type, where the player plays a pass into free space and two teammates performs simultaneously jump up, then one of them performs an attack (one of the methods permitted by rules). In defense, the types of synergistic effects are:
- effects of follow-up execution — (realized by two players), where the actions of the partners follow one another. An example of volleyball is: one player performs block in the first tempo, then a teammate executes a block on the second tempo.
 - effects of simultaneous execution — (performed by two or three players), where the actions of teammates are performed simultaneously. An example of volleyball is that three players (triple block) or two (double block) block the ball simultaneously with a defending player in the field of play.
 - effects of simultaneous and subsequent execution — (implemented by three players), where counteraction is performed by two players si-

multaneously, and then the third of them performs a defensive action resulting from the interaction of the former. In volleyball, such activities do not occur.

To sum up, cooperation in team sports must be treated holistically, as a separate ontological entity. When assessing cooperation, it is not possible to assess the effect of each of the participants in this process individually, but as a whole, functioning as one system that performs the activity. The effectiveness of cooperation is always dependent on its two basic elements, i.e. the synchronization and coordination of the actions of players who implement this process. To improve the effectiveness of cooperation, the reasons should always be sought in these two elements, because they determine the effectiveness of joint performance. To achieve success in team sports, you need to efficiently cooperate, which is why it is a fundamental element and the essence of team games.

REFERENCES

- [1] ANTOSZEWSKI, A., HERBUT, R.: *Słownik politologii*. Wrocław: Wydawnictwo Alta2, 1995.
- [2] ARONSON, E., WILSON, T. D., AKERT, R. M.: *Psychologia społeczna. Serce i umysł*. Poznań: Zysk i S-ka, 1997.
- [3] BIELECKI, R.: *Encyklopedia wojen napoleońskich*. Warszawa: Wyd. Trio, 2001.
- [4] CHABŁOWSKI, J., SKULIMOWSKI, W.: *Elektronika w pytaniach i odpowiedziach*. Warszawa: Wydawnictwa naukowo — techniczne, 1978.
- [5] COWAN, R.: *Rzymska sztuka wojenna od 109 p.n.e. do 313 n.e.* Warszawa: Wyd. Bellona, 2010.
- [6] DOBEK-OSTOWSKA, B.: *Podstawy komunikowania społecznego*. Wrocław: Astrum, 1999.
- [7] HATTIE, J., TIMPERLEY, H.: The power of feedback. *Review of Educational Research*, 2007, 77, pp. 81–112.
- [8] HEALY, M.: *Bitwa pod Kannami 216 p.n.e. Wielki triumf Hannibala*. Warszawa: Amercom, 2010.
- [9] ŁASIŃSKI, G.: *Sztuka prezentacji*. Poznań: Oficyna ekonomiczna wydawnictwa eMPI2, 2000.
- [10] MACKENZIE, A., BALL, A. S., VIRDEE, S. R.: *Ekologia. Krótkie wykłady*. Warszawa: Wydawnictwo Naukowe PWN, 2007.
- [11] MAZUR, M.: *Cybernetyka i charakter*. Warszawa: Wyższa Szkoła zarządzania i przedsiębiorczości im. Bogdana Jańskiego w Warszawie, 1999.
- [12] MIKA, S.: *Wstęp do psychologii społecznej*. Warszawa: Wydawnictwo Naukowe PWN, 1972.
- [13] NADOLSKI, A.: *Grunwald 1410*. Warszawa: Wyd. Bellona, 2010.
- [14] PANFIL, R.: *Prakseologia gier zespołowych*. Wrocław: Studia i Monografie, 2006.
- [15] PANFIL, R.: *Pragmatyka współdziałania w grach sportowych*. Wrocław: Wyższa Szkoła Zarządzania i Coachingu, 2012.

- [16] POJMAŃSKA T. Pasożytnictwo, pasożyty i żywicieli. Kosmos, problemy nauk biologicznych. *Polskie Towarzystwo Przyrodników im. Kopernika*, 2005, 54(1), pp. 5–20.
- [17] REIMER, T., PARK, E. S., HINSZ, V. B.: Shared and coordinated cognition in competitive and dynamic task environments: An information-processing perspective for team sports. *International Journal of Sport and Exercise Psychology. Special Issue: Team Cognition and Expert Teams: Emerging Insights into Performance for Exceptional Teams*, 2006, 4(4), pp. 376–400.
- [18] RYBICKI, P.: *Struktura społecznego świata*. Warszawa: Wydawnictwo Naukowe PWN, 1979.
- [19] SZTOMPKA, P.: *Socjologia. Analiza społeczeństwa*. Kraków: Wyd. Znak, 2002.
- [20] TUROWSKI, J.: *Socjologia. Małe struktury społeczne*. Lublin: Towarzystwo Naukowe KUL, 2001.
- [21] WIERZBOWSKA, I.: *Wilk*. Kraków: Fundacja Wspierania Inicjatyw Ekologicznych, 2010.

Genesis and Sources of Pragmatic Identification of Cooperation on the Example of Team Sports

ABSTRACT

The article presents the genesis and sources of pragmatic identification of cooperation on the example of team sports. The purpose of this paper is to present the most important concepts and sources that influence social interaction. By giving examples from sociology, technical sciences, biology and others, the author presents the genesis of cooperation in team sports. The work also deals with the impact of social struggles as a regulator of social interactions, as well as team play as a regulator of social interactions. The author also presents synergistic effects that derive from collaboration, and derive from basic social interactions between people. The author presents the most important concepts related to cooperation, the genesis of interactions and their similarity to the natural world, as well as examples of regulators of social interactions.

KEYWORDS

Interactions; cooperation; actions; social interactions; team; regulators

JEL CLASSIFICATION

C15; F12

✕

Basic Elements of Integral Management in Small and Medium-Sized Companies in the Czech Republic

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* 1. *Into emerging concepts of alternative management theories*

In the last third of the 20th century, conditions for business have changed radically. These are especially trends of discontinuous environments, globalization, internationalization, and intense competition. Gradually, new perspectives and philosophy of business management emerged. The circular economy, a contrary model to the linear economy dominating society in the past, is one example. The Institute of Circular Economy (INCIEN, 2020) describes the circular economy as a concept that finds inspiration in natural ecosystems in which there is no waste. The previously applied machine-type management model had been replaced by viewing the company as a living organism. The circular economy aims to value products and materials maintained for as long as possible, encouraging sustainability and competitiveness in the long term (EC, 2019).

On the other hand, the linear economy model gives preference to economic objectives, with less regard for ecological and social concerns and little reliance on related public policy interventions (Sauvé et al., 2016). The biological principle is

based on self-reproduction, quick responses to constant changes, including the knowledge environment. There are four main barriers – cultural, market, technological, and regulatory, that prevent introducing the circular economy's principles into practice (INCIEN, 2020). At the macroeconomic level, McKinsey & Company estimated in 2015 that by applying the principles of the circular economy, the EU, historically dependent on imports of raw materials from around the world, could not only tackle its environmental and social problems but save EUR 1.8 trillion by 2030 and, the circular economy has potential to create two million jobs (EC, 2019).

Permanent changes in the ecological, social, and economic systems that are highly dynamic require constant adaptation of the organizations to survive in the market (Sheehy, 2015). A critical factor for the successful competition is innovation sustaining customer satisfaction and reducing costs. The crucial part of this process and a component of the systems mentioned above is the Corporate Social Responsibility (CSR). CSR management tends to create innovative products or processes (Bernal-Conesa et al., 2016; Nesiba et al., 2018; Nesiba et al., 2020). As Martins and Terblanche

(2003) point out, the organisational culture itself can be immensely stimulating the innovation process within a company.

- **Purpose:** The aim of the paper is to analyze the implementation of integral management in small and medium-sized companies in the Czech Republic.
- **Methodology:** The questionnaire survey is based on data from 279 small and medium-sized companies in the Czech Republic.
- **Findings:** Results show the three components (sectors) of organizational management – circular economy, legality, and socio-culture. It examines the degree of implementation of TM in the management of SME companies in the Czech Republic with relation to the sector and business sector.
- **Implications for theory and practice:** The results of the presented research show that the rate of TM implementation in SME companies in the Czech Republic is higher on a quantifying scale in a certain segment of management and the economic sector (this is the medical sector). Thanks to its high professional level, this field is thus perceived as a highly ethical model of management. Therefore, elements of ethical business can be transferred to other areas of social services, services in general, but also to other business sectors.
- **Originality and value:** The presented research is the first research of integral management based on the organic TM model. In today's holistic approach to corporate governance (CSR, Environmental attitude, Ethical Company Culture), the TM approach is a new contribution to the current debate on improving management, which would mitigate global corporate problems to social, environmental and economic risks.

The concept of associate economics emphasizes developing the conscious coordination of procedures, distributors/traders, and consumers. It understands the global economy as a single unified domain whose goal embracing unequal interests is an economic sector managed by associations of

business corporations and consumer associations. These associations should be combined. Under certain conditions, no new enterprise should be founded. The research aimed to answer research question Q1:

- Q1 – What is the current level of TM implementation in Czech SME companies according to moral stage of development?
- H1 – The management of Czech companies focuses on issues of the working environment, less on issues of the environment (circular economy).
- H2 – The highest level of implementation will be in companies that deal with social services and health care.

2. *Threefolding Management*

Threefolding Management (TM) as a way of management is not an academically analyzed topic yet. TM is not mentioned in academic management textbooks. It does not have links on university servers, there are no university articles or research projects, both in mainstream professional forums and alternative research areas. The closest TM is usually associated with associative economics. The idea of associative economics is often also the inspiration behind community-supported agriculture, ethical banking, social finance, community land trust, and local currencies (Lamb, 2010). In general, it touches on topics such as social economics, non-growth theory, and environmental economics. However, the term Threefolding management has only recently been introduced (Nesiba, 2019).

This paradox is accentuated by a situation where there have been particular three-member professional institutions and associations for decades, which practically deal with this topic and, in cooperation with business and public sector, organize conferences and seminars or meetings, publish their publications, run their Internet domains, are internationally connected (i.e., institute: Initiative Netzwerk Dreigliederung, Institut



für Soziale Gegenwartsfragen e.V. Stuttgart, The Section for Social Sciences at Goetheaneum, Institut for Social Threefolding and others, Nesiba, 2020). There are also application workshops and corporate conferences on this topic in the Czech Republic (e.g., a conference held in Prague in 2013 entitled Free Company – Conference on human dignity and prosperous business, see <http://svobodnafirma.k3k.cz>) or it is work of long-term specific civic associations (in the Czech environment,

ment of Jan Patočka's phenomenology). K. R. Popper (1902–1994) scientifically substantiated the existence of the ontological triad, and the neurologist and Nobel Prize winner for neurology J. C. Eccles (1903–1997) conceived the theory of the existence of three worlds.

The ideas of social tripartism are manifested in the social sciences, in various forms. For example, in the 17th century by John Locke (1632–1704) or Charles Montesquieu (1689–1755), the demands

In the last third of the 20th century, conditions for business have changed radically. These are especially trends of discontinuous environments, globalization, internationalization, and intense competition. Gradually, new perspectives and philosophy of business management emerged. The circular economy, a contrary model to the linear economy dominating society in the past, is one example.

e.g., www.trojclennost.cz; in the European context, e.g., www.eliant.eu).

The topic of little knowledge of TM stems from the complexity of implementing these instruments based on a comprehensive anthroposophical philosophy. Therefore it has a professional background in philosophy, biology, sociology, psychology (evolutionism, sociobiology, systematics). On the one hand, TM is based on two sources of philosophy, on the theory of “threefolding” and the other hand, on the theory of social organism.

In general, threefolding is, in short, a philosophical system which, following the example of idealistic philosophy, builds on the existence of three ontological principles that form the basis of reality (i.e., trinity or tripartism). The principle of the trinity can be found already in antiquity, for example, in Plato and Aristotle (three parts of society and the soul), in the Christian faith (Holy Trinity) or the teachings of J. A. Comenius, who responded to Cartesianistic dualism. This philosophy gained a renaissance in modern times in the form of the German idealism (especially J. G. F. Hegel), which resonated in existential or hermeneutical philosophy in the twentieth century (e.g., the trivial move-

for the separation of the three components of state governance: executive, legislative, and judicial. In the 18th century, during the French Revolution, demands emerged for three fundamental pillars of society: freedom, equality, and brotherhood. According to land, labor, and capital, economic theories of the 19th-century work with a threefold economic relations division. At the end of the 20th century, this is discussed in connection with a new type of management, which emphasizes the equality of the three components of the organization's management, for an equal share of the economy, ecology, and the social sphere (the so-called Tripple bottom line as part of CSR management).

The second impulses for TM are the development of organic perception of social organizations. It finds the most inspiration for this way of thinking in fields related to the natural sciences. With the development of biology and Darwinism, ideas for understanding society as an organism have emerged from Herbert Spencer (1820–1903), through social Darwinism and conservative traditionalism, to today's systemic and sociobiological approaches. The organization is characterized as a

social organism, which can be analogous to a biological organism. In general, it can be said that social organism “is a general outline of the evidence that justifies the comparison of societies to living organisms. That they gradually increase in mass; that they become little by little more complex; that at the same time their parts grow more mutually dependent; and that they continue to live and grow as wholes” (Spencer, 1891).

In this paper, the concept of “threefolding” and “social organism” as proposed by the Austrian thinker Rudolf Steiner (1861–1925), will be elaborated. Steiner did not invent the principle of tripartite, but thought about it and created its organisational application. Because the threefolding originated as a response to the immediate needs of the present in which one lives (Steiner, 2014, p. 40). He developed the idea of social tripartism as a method of “healing” an ill organism, and where the process of cognition is a process of healing (Steiner, 2018a, p. 12). Humankind will be forced by a painful need to realize this need for spiritual “healing”. According to Steiner, Central Europe has the most significant role because TM reached the conditions for its development already during the 19th century (Steiner, 2018a, p. 30).

In 1906 in his lecture, *Geisteswissenschaft und Soziale Frage* (Engl. Spiritual science and the social question) based on Berlin workers' school students' experience, he formulated the fundamental

social law. For the first time, he states that: “*The well-being of a community of cooperating people is all the greater, the less an individual claims the results of his performance, the more he surrenders himself to his co-workers and the more his own needs are not met from his performance but the performance of others. All regulations within the society of people who oppose this law must, after a long period, cause misery and poverty*” (Steiner, 1987, p. 213; Steiner, 2014, p. 37). Originally, Rudolf Steiner intended the social organism's trinity as a practical tool for the needs of the post-war national economy in Germany as prevention against a new conflict (Steiner, 1983; Steiner, 1985).

According to Steiner, threefolding is not only a social theory but mainly a practice because it leads to “freedom”. Threefolding is based on the premise that human freedom can be developed, where “...only a non-free person following instinct or an accepted duty order rejects a neighbor if he does not follow the same instinct and the same order/tolerance. It would not be possible to inoculate a person with any external laws. A free person does not ask for consent from others but expects it because of human nature. By this, we do not point to the necessities that exist for these or those external devices, but to the mindset, to the mental state by which a person, experiencing himself among other people whom he respects, is likely to satisfy human dignity” (Steiner, 2017, p. 105–106). Steiner expressed

Table 1 » Threefolding sectors concept

Threefolding sectors		
Circular economy	Legal	Socio-culture
Economic relations are based on the circulation of goods and production (economic exchange), and the basis of responsibility to society and nature. Therefore, he perceived the term economics as what is closest today to circular economics, i.e., the company also includes in its economic balance sheet the impacts on society or the environment, which forces it to use innovation.	That is an area of rights associated with the employee's job classification, income, the relationship between the owner, manager, employee, and participating groups (stakeholders).	The area associated with the free personal realization of individual members of the company, includes, for example, corporate training or personal development of the employee.

Source: Steiner (2000a), Steiner (2019), Steiner (1972a), Steiner (1972b), Steiner (2014, p. 74–75), Steiner (1993, p. 35–57)



→ support for this type of management concerning associations and cooperatives (Steiner, 2019).

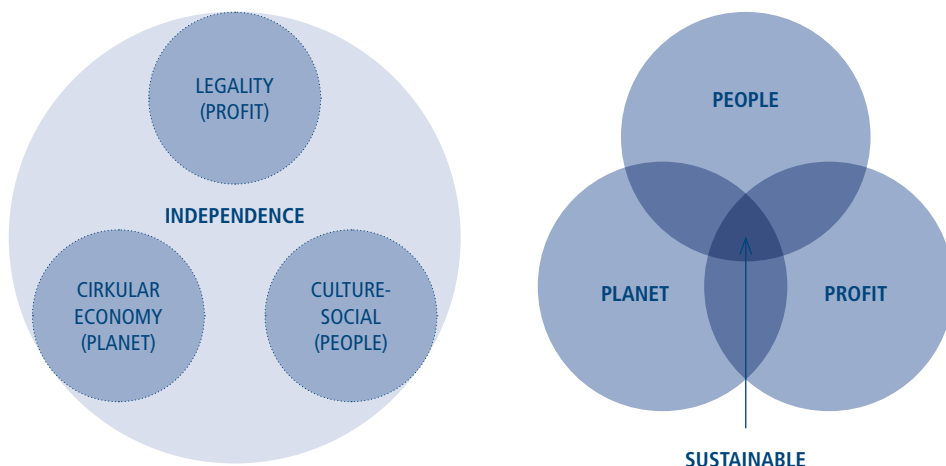
Following the spiritual view of human health, it is necessary to have three in balance sectors, but independently. Therefore, in the social organism, it is necessary to balance financial freedom (unilaterally emphasizes capitalism, liberalism), spiritual freedom (unilaterally emphasizes religion), but also legal freedom (unilaterally emphasizes Marxism). All this in the same ratio of three elements at once. *“This is called to something great, namely to create from the inside outward with his whole being, above all, the balance of what was previously temporarily prevalent in the most diverse way and at different times”* (Steiner, 2007, p. 74).

The basis is the assumption of the impenetrability of sectors, each must be independent, both in a specific environment of the organization or the state, and should be administered separately (Steiner, 2000b, p. 21). Independence follows that the modern economic system has its laws in labor division, in education, in law-making. It is impossible to examine every science analytically separately, but synthetically together, and each sector independently. As Steiner said, do not give the emperor

what is divine and to God what the emperor is. He refuses (Steiner, 2018b, p. 27). It is not an idealistic or an ethical approach, but an impartial „national economy“ approach, no god, no moral law, no instinct in modern economic life at work, in the production of goods requires altruism, but simply a modern division of labor (Steiner, 2000b, p. 50). The advanced labor division means that it is no longer possible to follow only economic theories, but it is necessary to follow reality (Steiner, 2000c, p. 94). Between 1919 and 1924, Steiner devoted himself intensively to three folding. The closest threefold theory is the so-called Triple Bottom Line in CSR Management. However, the interpretation is different, while CSR Management works with merging the three sectors, so TM works independently.

However, the most significant risk in implementing TM is its high organizational complexity. It is stated that more conscious awareness is needed to understand the ideas of three folding (Baumann, 2002, p. 168). The whole system is not just about management, but the overall corporate culture and setting of its employees for the benefit of the organization

Figure 1 » Difference of threefolding and CSR management, left: independence of threefolding sectors, right: blending of three sectors in CSR management



Source: own processing

So far, this holistic, integrative complexity seems to be a barrier to broader implementation. Three-member management encourages more personal implementation and application than systematization and definition. It is an organic approach to corporate culture and cannot be defined simply. The idea of three-member management of the organization has been applied in the private sector throughout the 20th century with varying degrees of success (e.g., Leber, 1982; Kühn, 1978; Schmelzer, 1991). This is not a rigid definition of management methods, but a procedural matter that shapes each company's possibilities separately (e.g., Rist, 1997; Eisenhut, 2014). Partial research is currently underway, e.g., connected with the new definition of money's functioning, which is only one of the three elements of the economic process (e.g., Archiati, 2016).

TM tools are currently developed by the thousands of companies currently operating globally under anthroposophical inspirations. There are even special certifications of management quality and production methods that refer to implementing of threefold management elements (e.g., Demeter International, Waldorf and Camphill education, anthroposophical hospitals, free banking, regional currencies, and others). Interest in the possibility of involving the three folding in management is growing with deepening global social, economic and environmental risks. The inclination to socially and environmentally friendly companies' management at the expense of short-term profit is a topical issue. Inspired by the threefolding, several initiatives are emerging to address current global challenges (e.g., www.ecogood.org and others) or new alternative management concepts (e.g., Theory U, see Scharmer, 2009) or political actions (e.g., Philippine President Nicanor Perlas with his Global Network for Social Threefolding <http://www.globenet3.org>).

At present, three-member management elements are being promoted hidden in new management approaches such as Holistic Management, Integral Management, Spiritual Management, or

CSR Management. It is impossible to talk about the fact that it is an ideal TM, but certain elements are gradually manifested in these mentioned managerial directions. The current situation in the period before Covid-19 in Czech companies is the goal of this article's research.

3. Methodology

Current TM research is very little quantitative. Research on social threefolding generally focuses on the philosophical, social, economic, or historical broad contexts of developing this idea (e.g., Schmelzer, 1991; Witzenmann, 1999; Sulík, 2012; Eisenhut, 2016). In this research, the author focuses on a statistical comparison of the current state of the frequency of occurrence of elements TM in Czech companies. There are not many quantified approaches to measuring ethics in organizations due to the methodological incomprehensibility of ethics. Preferably it theoretically scales according to general standards. In the 1990s, CSR's first study came in a similarly when this management tool began to progressively develop, for example the Reidenbach and Robin stages of corporate ethics (Reidenbach, Robin 1990). The research is based on a quantitative survey methodology indexing the three components (Nesiba, 2019).

This paper shows how TM empirically examines indexing, called the Threefolding Management Index (further TMI). The TMI is set to measure management within private small and medium-sized enterprises (SMEs), e.g., SME concerns with EC 250 employees and annual turnover up to EUR 50 million through all fields of industry and service (European Commission Decision, 2003). For these reasons, it may seem useful to create a certain TM measurement level using accurate indicators. They refer to the measure of implementation of instruments standing on the theory of Social Threefolding. Quantitative investigation and arithmetic index, as a result, may be a variant of how to recognize the current state of TM.

TM instruments can be most easily measured →

→ using a questionnaire survey directly in the company. To maintain objectivity, we shall to obtain data from multiple sources, which may differ in qualitative interpretation (similar to CSR standards being asked by a stakeholder). Therefore, in this paper’s drafting, we include eleven questions that refer each to one specific indicator. In sum, therefore, it is about obtaining data on 33 indicators. Due to the variability of the company’s current state, it is necessary to consider the scatter on the answers. Again, concerning the practicality of the research’s interpretation, we propose three points for each question. Each sector may have a scatter of eleven to thirty-three points. The questions concern various aspects of management – employee fluctuation, social projects, environmental management, implementation of ethical labels (ECO label) or standards (ISO, GRI, EMAS), corporate culture, social and health insurance, and others. TMI is calculated in each sector according to this equation:

Number of gained points

=

Number of possible maximum points

= TMI (sector 1,2,3)

From this simple formula, data can be obtained for individual sectors: maximum number 1 and minimum $\div 0.3$. Because we measure all three sectors, the individual data from three sectors (together 33 queries and measured indicators) need to be

summed to get the resulting number. So the end result is minimal $\div 0.3$ and maximum 3.

TMI (sector 1) + TMI (sector 2) + TMI (sector 3) =

= TMI (complexive)

The formal aspect of CSR research is oriented to a simple statistical function. It is possible to determine the ratio in the company’s sectors (i.e., the rate of implementation of ethical instruments), but this ratio should not be targeted to one of the sectors. At the same time, the total result of a particular company can be determined. The company may get a scoring score of 0.9–3.

The TMI total sum in all three measured sectors gives the initial information on ‘TM elements’ degree of implementations. For better orientation, it is possible to use an analogous structure to develop the individual’s moral competencies. ForTMI, we can use psychological tools to determine an individual’s moral competencies in the form of Kohlberg’s stages of moral development (Kohlberg et al., 1983). However, for research purposes related to the social behavior of companies. For ease of diagnosis, point scores are added to each stage, and we have the first results of three main stages – preconventional, conventional, and postconventional.

4. Results

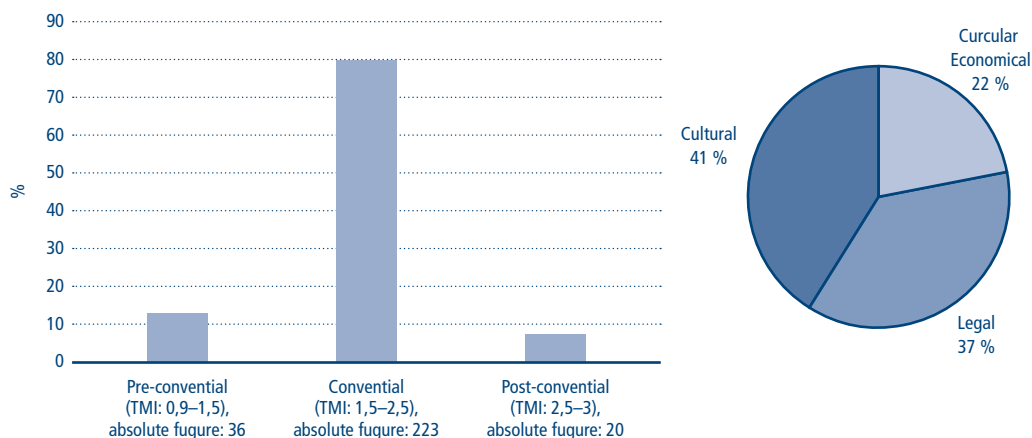
The above explained methodology was used for a survey of Czech companies from 2019 to 2020.

Table 2 » Three levels of the TMI complexion

Degree of development by the TMI	Characteristics	TMI complexion
Postconventional	Ethical Principle Orientation, Principle Driven, Social Contract Orientation.	2.5–3
Conventional	Authority orientation, Reaction mechanisms, Responsive, Social Responsibility if profitable.	1.5–2.49
Preconventional	Focus on law, Profitability, Operational, or Crisis management.	0.9–1.49

Source: own processing

Figure 2 » Absolute figures of TMI; left — the ratio of the three stages of development of companies; right — the ratio of the three sectors in all companies



Source: own processing

The research ended in January 2020 before the Covid-19 pandemic. Questionnaires were examined in 279 small and medium-sized companies. The result thus reflects the state of implementation until February 2020. The purpose of the research was to map how TM elements based on the TMI are used. The data were processed in the statistical program, which variables determine the higher level of the TMI. We surveyed the relations between the number of employees and the subject of activity.

The TMI methodology does not measure the independence of sectors, but the degree and mutual shares of individual sectors' implementation. From the general sum of all sectors in companies, it is possible to determine which sector is the most developed. Results show that the most developed sector is "cultural." That is the sector where the company allows employees to develop personally. The second most developed sector is the "legal" sector, i.e., working conditions, employers' relationships with employees, stakeholders, and others. This fact can be interpreted by complying with legal regulations and standards set in the Czech

Republic and the EU. The least developed sector concerning others is the "economic" sector (circularly economic), i.e., the company's relationship to the environment, CSR, and the economic consequences of its activities.

The descriptive result of the research shows the absolute ratio of the TMI in three groups of companies, at different stages: pre-conventional, conventional, and post-conventional companies, and their relationship in the figure 2.

There are no associations in the pre-conventional, but just trade, auctions, rental, machinery, construction, metalworking, and transport. In a post-conventional way, 90% of companies have up to a hundred and eighty employees. In the post-conventional, most of the company object in sectors is — advisory, services, sport, and entertainment, providing services. The main research question concerned the relationship between the number of employees and the overall level of the TMI.

An analysis of the number of employees of the company concerning TMI was performed. The dependence of these two variables was not con-

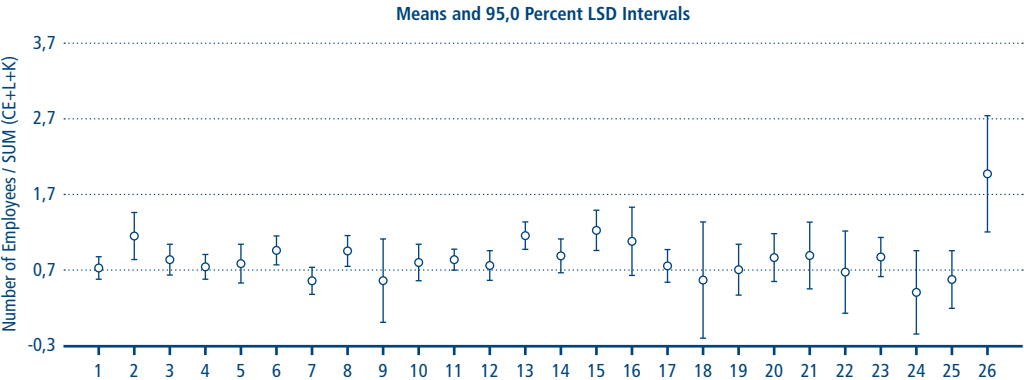
→

→ **Table 3 » Multiple range tests for number of employees / SUM (TMI Sector 1+2+3) by company object**

Company object	Count	Mean	Homogeneous groups
26	1	2.0	X
Contrast	Sig.	Difference	+/- Limits
1–26	*	-1.31438	1.17862
3–26	*	-1.19931	1.19801
4–26	*	-1.3044	1.1834
5–26	*	-1.24918	1.21999
7–26	*	-1.51092	1.19094
9–26	*	-1.49875	1.4175
10–26	*	-1.23598	1.20885
11–26	*	-1.19259	1.17533
12–26	*	-1.28121	1.19301
17–26	*	-1.28151	1.19801
19–26	*	-1.34656	1.26785
24–26	*	-1.66118	1.4175
25–26	*	-1.47752	1.294

* denotes a statistically significant difference
Note: Method: 95.0 percent LSD
Source: own processing

Figure 3 » Means and LSD Intervals showing HealthCare Business (26) as significant to Number of Employees and Sum of TMI



Source: own processing

firmed, but the business subject proved to be an essential factor in the number of employees' statistical analysis. According to the Czech Civil Code regulation, the twenty-six subjects of business of legal entities were examined. No dependence was found according to business, but it proved to be a significant factor in business Healthcare (it has a number twenty-six in the left column).

The statistically significant difference can also be documented according to another attached chart, where item no. 26 (HealthCare) stands out significantly. It is not a statistical dependence, but it can be shown that in the ratio of the number of employees to TMI, if it correlates with the business (according to The StatAdvisor application), it shows a significant deviation. The number 26 stands out more than the other items.

Figure 3 displays a multiple comparison procedure to determine which means are significantly different from others. The bottom half of the output shows the estimated difference between each pair of means. An asterisk has been placed next to twenty-four pairs, indicating that these pairs show statistically significant differences at the 95.0% confidence level. At the top of the figure, five homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. The method currently being used to discriminate among the means is Fisher's least significant difference (LSD) procedure. With this method, there is a 5.0% risk of calling each pair of means significantly different when the actual difference equals zero value.

5. Discussion

The research aimed to answer research question Q1: What is the current level of TM implementation in Czech SME companies according to moral stage of development?

In this area, a result was achieved on a specific sample of SME companies in the Czech Republic. Most according to the methodology of stages of

moral development (L. Kohlberg) fall into the conventional stage. In view of the future needs of a holistic approach to management, more room is opening up for the TM implementation rate to deepen and for more companies to fall into the post-conventional area.

H1 – The management of Czech companies focuses on issues of the working environment, less on issues of the environment (circular economy).

This hypothesis has been confirmed, and circular economy and environmental behavior are receiving half the percentage attention.

H2 – The highest level of implementation will be in companies that deal with social services and health care.

Using a statistical program, it was found that the highest score in TM is achieved by those companies that deal with health care. Healthcare is thus professionally the most prestigious profession, which can become a model for other sectors of the economy.

The research presented possible new ways of management, as measured by quantifiable inputs and the index of social organic and organic management. So far, this issue has been more part of theoretical models, but increasingly growing contradictions in economics, ecology and social affairs are shaping new types of management approaches, and TM is one of the possible models of solutions.

6. Conclusion

The paper presents research on small and medium-sized companies in the Czech Republic in the years 2019/2020. The research ended in January 2020, before the outbreak of restrictive measures concerning Covid-19, and focused on analyzing the degree of threefolding management (TM) implementation in private Czech companies. Threefolding management is a specific way of management, which follows from the philosophy of Rudolf Steiner and is currently practiced as one of the alternative ways of management, mainly in German-



speaking countries. Threefolding management separates economic (circular-economic), legal and cultural management. These elements are reflected in the management across the spectrum of the subject of business. The research examined the development of TM elements in Czech companies using TMI's quantitative methodology, which enables a quantitative comparison of companies based on the analysis of thirty-three fundamental elements of management.

A partial result of the research is an absolute comparison of specific three sectors (economy, legality, culture), where in fact, that by the whole

percentage of all surveyed Czech companies is an emphasis made on corporate culture, then legality, and the least emphasis is placed on economic (circular economic) aspects of business and the impact of economic activity on stakeholders. The research focused on whether TMI is affected by the number of employees. This research does not show a statistical correlation. The main research question of the relationship between the number of employees to TMI concerning the field of activity proved to be an essential factor in health services. This branch denotes a statistically significant difference to other objects of activity.

REFERENCES

- [1] ARCHIATI, P.: *Money Matters – but So Does Trust! From an Economy Based on Money to an Economy Based on Human Value*. Temple Lodge Publishing, 2016.
- [2] BAUMANN, A.: *ABC der Anthroposophie: Ein Wörterbuch für Jedermann*. Oratio Verlag, 2002.
- [3] BERNAL-CONESA, J. A., BRIONES-PEÑALVER, A. J., DE NIEVES-NIETO, C.: The integration of CSR management systems and their influence on the performance of technology companies. *European Journal of Management and Business Economics*, 2016, 25(3), pp. 121-132.
- [4] EISENHUT, S.: *Zur Komposition des Nationalökonomischen Kurses Rudolf Steiners*. Eisenhut: Artikelserie von Stephan Eisenhut, 2014.
- [5] EISENHUT, S.: *Zdravá a nemocná ekonomika. Možnosti a cesty ozdravení ekonomického procesu podle poznatků Rudolfa Steinera*. Hranice: Fabula, 2016.
- [6] EC: *Circular economy*. Brussels: European Commission, 2019. [online]. Available from: <https://ec.europa.eu/growth/industry/sustainability/circular-economy_cs>.
- [7] EC: *EC Decision 2003/361*. Brussels: European Commission, 2019. [online]. Available from: <<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:124:0036:0041:EN:PDF>>.
- [8] INCIEŇ: *Circular Czechia*. Praha: Institut cirkulární ekonomiky, 2020. [online]. Available from: <https://incien.org/wp-content/uploads/2018/11/circular_czechia.pdf>.
- [9] KÜHN, H.: *Dreigliederungs-Zeit. Rudolf Steiners Kampf für eine Gesellschaftsordnung der Zukunft*. Dornach: Verlag am Goetheanum, 1978.
- [10] LAMB, G.: *Associative economics: spiritual activity for the common good*. Ghent: AWSNA, 2010.
- [11] LEBER, S.: *Selbstverwirklichung – Mündigkeit – Sozialität. Eine Einführung in die Idee der Dreigliederung des sozialen Organismus*. Frankfurt am Main: Fischer Taschenbuch, 1982.
- [12] MARTINS, E. C., TERBLANCHE, F.: Building an organisational culture that stimulates creativity and innovation. *European Journal of Innovation Management*, 2003.
- [13] NESIBA, J., STRÁNSKÝ, M.: Etický management veřejných institucí v ČR. In: *XXI Mezinárodní kolokvium o regionálních vědách: sborník příspěvků*. Brno: Masarykova univerzita, 2018, s. 457-464.
- [14] NESIBA, J.: Indexing of threefolding management. In *Proceedings of the 12th International Scientific Conference European Forum of Entrepreneurship 2019*. Prague, Newton College, 2019, pp. 95-111.
- [15] NESIBA, J.: Theory of social threefolding: economics, politics and culture in threefolding manage-

- ment in Central Europe. In *Proceedings of the 5th Annual International Scientific Conference Faculty of Applied Languages*. Bratislava: University of Economics in Bratislava, 2020, pp. 270–288.
- [16] NESIBA, J., ČUHLOVÁ, R.: CSR management v cukrovarnictví severní a jižní Číny dle kritérií Water Footprint. *Listy cukrovarnické a řepařské*, 2020, 136(7–8), s. 286–291.
- [17] REIDENBACH, R. E., ROBIN, D. P.: Toward the development of a multidimensional scale for improving evaluations of Business Ethics. *Journal of Business Ethics*, 9(8), pp. 639–653.
- [18] RIST, M.: *Schritte zu einer geistgemäßen Sozialökonomie*. Reinach: Johannes Kreyenbuhl Akademie, 1997.
- [19] SAUVÉ, S., BERNARD, S., SLOAN, P.: Environmental sciences, sustainable development, and circular economy: Alternative concepts for trans-disciplinary research. *Environmental Development*, 2016, 17, pp. 48–56.
- [20] SCHARMER, C. O.: *Theory U: Leading from the Future as It Emerges*. Berrett-Koehler Publishers, 2009.
- [21] SCHMELZER, A.: *Die Dreigliederungsbewegung 1919*. Stuttgart: Rudolf Steiners Einsatz für den Selbstverwaltungsimpuls. Freies Geistesleben, 1991.
- [22] SHEEHY, B.: Defining CSR: problems and solutions. *Journal of Business Ethics*, 2015, 131(3), pp. 625–648.
- [23] SPENCER, H.: The social organism. *Essays: Scientific, Political and Speculative*, 1891, 1, pp. 265–308.
- [24] STEINER, R. (1972a). *World Economy. The Formation of a Science of World-Economics*. T Dornach: Rudolf Steiner Press, 1972.
- [25] STEINER, R. (1972b): *The Threefold Social Order*. The Anthroposophic Press, 1972.
- [26] STEINER, R.: *Neugestaltung des sozialen Organismus*. Dornach: Rudolf Steiner Verlag, 1983.
- [27] STEINER, R.: *Die Befreiung des Menschenwesens als Grundlage für eine soziale Neugestaltung*. Dornach: Rudolf Steiner Verlag, 1985.
- [28] STEINER, R.: *Lucifer – Gnosis*. Dornach: Rudolf Steiner Verlag, 1987.
- [29] STEINER, R.: *Hlavní body sociální otázky jako životní nutnost pro přítomnost i budoucnost*. Praha: Baltazar, 1993.
- [30] STEINER, R.: *Toward a Threefold Society: Basic Issues of the Social Question*. Rudolf Dornach: Steiner Publications, 1999.
- [31] STEINER, R. (2000a): *Towards Social Renewal: Rethinking the Basis of Society*. Dornach: Rudolf Steiner Press, 2000.
- [32] STEINER, R. (2000b): *Idea sociální trojčlennosti*. Olomouc: Michael, 2000.
- [33] STEINER, R. (2000c): *Národohospodářský kurz*. Hranice: Fabula, 2000.
- [34] STEINER, R.: *Poslání jednotlivých duší národů*. Olomouc: Michael, 2007.
- [35] STEINER, R.: *Trojčlennost jako inspirace. Podněty k řešení sociální otázky*. Hranice: Fabula, 2014.
- [36] STEINER, R.: *Filosofie svobody*. Hranice: Fabula, 2017.
- [37] STEINER, R. (2018a). *Léčivé faktory pro sociální organismus*. Olomouc: Michael, 2018.
- [38] STEINER, R. (2018b): *Vnitřní aspekt sociální otázky*. Olomouc: Michael, 2018.
- [39] STEINER, R.: *The Social Question. A Series of Six Lectures by Rudolf Steiner given at Zurich*. Zurich, 2019.
- [40] SULÍK, D.: *Sociálna trojčlennost. Stredoeurópsky koncept sociálne spravodlivej spoločnosti*. Bratislava: Vladislav Stanko, 2012.
- [41] WITZERNMANN, H.: *Spravedlivá cena. Úvod do sociální organiky Rudolfa Steinera*. Praha: Ateliér pro eurythmii, 1999.



→ Basic Elements of Integral Management in Small and Medium-Sized Companies in the Czech Republic

ABSTRACT

The paper presents 279 small and medium-sized private companies operating in the Czech Republic, analyzed by a questionnaire on implementing the elements of integral management. Elements of integral management are defined in terms of threefold management (TM) and the social organic theory. The survey was completed in February 2020, examining the situation before the social restrictions caused by the Covid-19 pandemic. The research results are quantitatively based on the threefold management index (TMI) for private companies. Results show the three components (sectors) of organizational management – (circular) economics, legality, and culture. The authors examined the relationship of TM number of employees in firms and the relationship of the number of employees to the business relative to TM using variance (ANOVA). The research presents direct results that reflect the state before the economic changes caused by Covid-19.

KEYWORDS

Integral management; theory of social organism; small and medium-sized companies; circular economy

JEL CLASSIFICATION

K20; K22; M14; M20



Relationships between Personality Traits of Military Professionals — Managers with a Focus on Self-Esteem

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* 1. Introduction

Current commanders are primarily seen as managers because they perform managerial, command and staff functions. A prerequisite for the successful performance of the military manager profession is not only managerial, but also technical and interpersonal skills and abilities, which find their expression in various competencies. These skills and abilities are developed throughout life during a military career. The only comprehensive competency model on which the Armed Forces of the Czech Republic rely is the model based on the catalogue of occupations of the National System of Occupations (NSP), on which we will, among other things, base this research study. Given that the University of Defense in Brno is responsible for the training of military professionals — managers in the Army of the Czech Republic (ACR), we will also look for consequences in the context of this educational institution.

One of the most important competencies of a commander is his ability to manage stress, which is related to many different personality variables. Many of these variables are listed in the so-called soft skills. In the NSP, this competence is assessed by the commander of the ACR so that it should be at least above average (i.e. reaching level 3 on a

scale of 0–5, which is used in this database). This means, among other things, that in stressful situations the commander reacts evenly, gives reasonable performance even during long-term stress and even in difficult situations does not lose control of his emotions. The NSP also states that adequate self-confidence also allows commanders to manage stress (www.nsp.cz). Commanders and military managers have direct responsibility for the health and lives of their subordinates. Even in the tensest situations, they should be able to keep a cool head, which is associated with high demands on emotional stability. High levels of emotional stability predict strong task performance within teams (O'Neill & Kline, 2008) and are vital for team working (Moscato and Iglesias, 2009) and team leadership (Hogan et al., 1994) due to elevated self-confidence (Larson and LaFasto, 1989) and low stress levels (Wellins et al., 1991). An important component of self-confidence is the self-esteem we would like to focus on in this research in relation to personality traits. It was found that higher level self-esteem acts as a protective factor (Holden et al., 2014). In case of high level of perceived stress, higher the degree of self-esteem acts as protection against depressive symptoms (Eisenbarth, 2012). Self-esteem has not yet been psychologically examined in the ACR. The benefit of this research



→ may therefore be to expand this still relatively narrow knowledge base and to suggest opportunities for further development of managers, future military leaders.

2. Theoretical and empirical background

The relationship between competence and personality traits of leader has been previously analyzed in several studies (e.g. Hannah and Avolio, 2011; Wright and Goodstein, 2007; Wright and Quick, 2011). Since the beginning of the twentieth century, a considerable number of studies (e.g. Kirkpatrick and Locke, 1991; Mann, 1959; Stogdill, 1948; Stogdill, 1974) have been conducted dealing with the characteristics or features of successful leaders. A variety of research has provided extensive lists of ideal features: diligence, self-management, trustworthiness, honour, confidence, reliability, verbosity, social feelings, objectivity, intelligence, trust, integrity, etc. However, studies nowadays focus on cohesion of leadership self-efficacy and emotional intelligence (e.g. Hughes, Schell and Tallman, 2018; Khorakian and Sharifirad, 2019; Mullen et al., 2019).

Lyrakos (2012) reported a positive correlation of stress level with neuroticism, as well as negative ways of copings, accommodation coping, avoidance coping, and devaluation coping, all of which can increase the levels of stress. Several research studies (e.g. Judge et al., 2002; Lyrakos, 2012; Maddi et al., 2002) refer to the negative effects of neuroticism on burden management. Johnson and Hill (2009) reported a significant difference between the effective and ineffective leader frame of the reference condition in neuroticism, with the effective leader rated as lower on this variable. The effective leader was rated as significantly higher in extraversion, openness to experience, agreeableness, and conscientiousness than the ineffective leader. In addition to the discussed issue, Chamorro-Premuzic and Furnham (2005) reported the most important link between leadership and extroversion based on meta-analysis of 73 correlation

studies using the Big Five model. The model itself, however, does not provide a causal explanation for the success of the leaders. The results of Derue et al. (2011) show that leader behaviors tend to explain more variety in leadership effectiveness than leader traits, but the results specify that an integrative model, where leader behaviors mediate the relationship between leader traits and effectiveness, is warranted. Bradley et al. (2002) conducted a longitudinal study in which Canadian officers ranked high in terms of dominance, extroversion, and internal control, and were rated the most effective in their 3-year career.

Cooperative activity of military teams is typical for military organization. Many studies have reported that the social competencies are an important factor of their success (e.g. Durlak et al., 2011; Magelinskaitė-Legkauskienė, Legkauskas and Kepalaitė, 2018). Several studies have addressed the question of how newly promoted managers develop emotional and social competencies in order to understand their own and others' emotions and personal growth (e.g. Park and Faerman, 2019). The study conducted by Vidic et al. (2016) outlines that leaders must dispose of highly developed interpersonal, motivational, social, and emotional skills.

2.1 Self-esteem

The author of the concept of self-esteem, to which psychology most often turns is Rosenberg (1979). His best-known conception understands self-esteem as a global relationship to his person that is emotionally positive or negative. In later years, he developed his concept together with colleagues to separate global self-esteem from self-esteem specific (Rosenberg et al., 1995). A specific self-esteem is defined as self-assessment in a specific area. We can also consider the ACR environment as this.

Unfortunately, there is not much research to show self-esteem in military personnel. Some of those that exist, for example, excluded those in military service (Bachman and O'Malley, 1977) or

had small samples (Platt et al., 1970). Low self-esteem in some soldiers was the result of the stigma of mental health (Greene-Shortridge, Britt and Castro, 2007).

Self-esteem is one of most important characteristics in terms of personality, behaviour, motivation and personal development (Tangney and Fischer, 1995). Some studies point to the importance of hereditary, genetic influences, while others argue that self-esteem is the result of actions and influences that develop throughout an individual's

Self-esteem may play a critical role in shaping personality processes. Individuals' beliefs about themselves influence how they act in particular situations, the goals they pursue in life, how they feel about life events and relationship partners, and the ways in which they cope with and adapt to new environments. For example, a low self-esteem individual might lack the self-confidence to engage in a wide range of social behaviors and, consequently, become more introverted. Many prominent areas of personality research assume a central role for

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life. Self-esteem and personality are likely to share common developmental roots and examining the personality correlates of self-esteem across the life span might provide insights into the nature of self-esteem and its development. Like personality, self-esteem is moderately heritable, with about 30% of the variance due to genetic differences (Dörr, 2005; Kendler, Gardner and Prescott, 1998).

The development of military professionals may also be closely related to their confidence in their ability, which contributes to the level of their professional competencies, but is also largely limited by their personality traits, such as emotional stability or instability, i.e. neuroticism. In general, people with higher self-esteem are better able to cope with stressful situations. Schaubroeck and Ganster (1993) emphasized in this context that people with high self-esteem perceive themselves as having greater control over their surroundings than those with lower self-esteem. Self-esteem is a part of the concept of Gordon's Personal Profile Inventory, which is intended to measure personality with respect to eight specific personality traits.

self-esteem and self-evaluations, including research on self-conscious emotions such as shame and embarrassment (e.g., Tangney and Fischer, 1995), attachment (e.g., Shaver, Collins and Clark, 1996), self-defining memories (e.g., Singer and Salovey, 1993), goals and motivation (e.g., Carver and Scheier, 1998), and depression (Seligman et al., 1979).

Many studies in the context of self-esteem have been conducted in the school environment. Low self-esteem is associated with violence, early school leaving, and low academic success (Missetich and Delis-Abrams, 2003). School programs that pair students with mentors and focus on relationships, self-confidence, goal setting, and academic help, increase student confidence, and reduce depressive behavior (King et al., 2002). Research in the United States has shown that youth mentoring is a promising strategy for increasing self-esteem (Marino et al., 2020). Several studies have reported Big Five correlates of self-esteem. Most of the studies used college student samples and found that self-esteem had a strong positive correlation with

emotional stability, moderate positive correlations with extraversion and conscientiousness, and weak positive correlations with agreeableness and openness (Goldberg and Rosolack, 1994; Jackson and Gerard, 1996; Kwan, Bond and Singelis, 1997; Keller, 1999; Robins, Hendin and Trzesniewski, 2001; Robins et al., 2001).

In the Czech Republic Klimusová et al. (2014, in Blatný et al., 2014) investigated the correlation between the GPP-I scale and the NEO-PI-R questionnaire using Spearman correlation coefficients. The factor neuroticism was most negatively bound by the stability factor (-.420**), followed by the responsibility factor of (-.320**). The other two factors, ascendancy and sociability, statistically related to neuroticism only weakly (-.162), respectively (-.151). It, therefore, appears that emotional stability often cited as an essential personality prerequisite for dealing with the burden, may also be closely related to self-esteem.

3. Methods

One of the possible application recommendations of the outputs of this research is to contribute to the proposal of how to approach the personal development and training of commanders in the future. It focuses on the context of the development of stress management competencies based on the analysis of personality traits. Pospíšil (2016) considers this competence of commanders to be key in the development of soft skills. So far, however, in the ACR has not sought connections with self-esteem, which could prove to be an important intervening variable in this regard.

The aim of the research is to identify the personality traits of military professionals – managers in the ACR with a focus on self-esteem in terms of their development. To meet the goal of the research, this study identifies statistical dependencies between personality variables in a selected group of military professionals – managers. For this purpose, a correlation and regression analysis will be performed, which focuses on statistical re-

lationships between selected personality variables of the so-called Big Five using the NEO-FFI questionnaire and Gordon's personality questionnaire.

Based on the theory and empirical research mentioned in the previous section, I determined the research question: *How does the degree of neuroticism of military professionals-managers in the Army of the Czech Republic affect the level of self-esteem?* In connection with the research question, I set the following hypotheses:

- *H1: Higher neuroticism score of military professionals – managers in the Army of the Czech Republic is statistically significantly related to their lower self-esteem.*
- *H2: For military professionals – managers in the Army of the Czech Republic, in a regression model using independent variables of the Big Five, neuroticism explains the greatest variability in the variance of the dependent self-esteem variable.*

3.1 Procedure and Participants

Multi-stage sampling was chosen as the as the method of selecting the research set. In 2018–2019, we first randomly selected units of the ACR and in the next step randomly selected commanders-managers at the lower and middle management level. This corresponds approximately to the level of platoon or company commander. It may represent for us a certain image of what people, from the point of view of their personality, perform demanding military service in these managerial positions. The reason for using this criterion for the selection of a research sample in the ACR was that students of all military disciplines from the University of Defense in Brno are already continuously preparing for command positions for these levels of management during their studies. This may provide us with a sample for future comparison in the contemplated follow-up research. Respondents signed an informed consent to participate in the research. Research data were anonymized.

Table 1 » Sociodemographic parameters of the research sample

Variable	Variant	N	%	M	SD
Sex	Males	102	93.6		
	Females	7	6.4		
Education	Primary education	8	7.3		
	Secondary education	81	74.3		
	Higher Vocational School	1	0.9		
	Bachelor's degree	2	1.8		
	Master's degree	17	1.8		
Age				27.8	6.6
Length of practice in the ACR				4.7	4.3

Notes: N — number of observations, M — mean value, SD — standard deviation

Our research sample consisted of a total of 109 respondents, composed of commanders — managers at the level of middle and lower management in the ACR. These military professionals therefore represented a realistic pattern of personality dispositions and traits in the specific conditions of the army. An overview of the socio-demographic variables of the research file is given in Table 1. The research sample was not gender-balanced, however, this composition corresponds to the distribution of both males and females in ACR. Due to the very low number of females in the research file (6.4%) and the high prevalence of respondents with secondary education (74.3%), gender and education factors were not considered as discriminatory. Apart from the basic sociodemographic variables, the length of experience in the ACR was also monitored.

3.2 Psychological testing

The standardized psychological methods for the Czech population were selected for the basic test battery:

1) Gordon personal profile — inventory (GPP-I)
The Czech edition of GPP-I was used (Gordon, 1999). The results of this questionnaire provide in-

formation on the relevance of the person's traits to the decision-making process in the job description. Respondents accepted this method because of the feeling of relative freedom of choice, which gives everyone a sense of freedom and strengthens the credibility of the expression. It is comparable to Cattle's 16 PF method (Cattell, 1990). For the demands of the research, it provides a measurement of personality traits that can cover the most striking aspects of a person's temperament. These are the following features: ascendancy (A), responsibility (R), emotional stability (E), sociability (S), self-esteem (SE), cautiousness (C), original thinking (O), and personal relationships — personal relations (P), vigor (V). The measure of self-esteem is provided by the sum of the following four scale scores: ascendancy, responsibility, emotional stability and sociability. The internal consistency of the GPP-I questionnaire scales, as determined by the Cronbach's alpha coefficient, ranged between 0.559 (ascendancy) and 0.783 (sociability) (Gordon, 1999). The characteristics of the self-esteem variables are described in Table 2.

2) NEO five-factor personal inventory (NEO-FFI)
The Czech edition of NEO-FFI questionnaire was used (Hřebíčková and Urbánek, 2001). It is based



→ **Table 2 » Characteristics of variables self-esteem**

Self-esteem	Characteristics
Ascendancy	The high score characterizes individuals who have a verbal superiority, take an active role in the group, make independent decisions and are confident in their relationships with other people.
Responsibility	Individuals who are able to persevere in any assigned work, who are persistent and determined and can be relied on, earn a high score.
Emotional stability	High scores on this scale are achieved by individuals who are balanced, emotionally stable, and relatively independent of worries, anxiety, and nervous tension.
Sociability	High scores are characteristic of individuals who prefer society and work with other people who are sociable.

Source: Gordon (1999, p. 8)

on the NEO Five-factor inventory of Costa and McCrae (2008). The questionnaire is based on the concept of the Big-Five. This five-factor model of personality focuses on identifying the degree of individual differences in these dimensions: neuroticism (N), extravertness (E), openness to experience (O), agreeableness (A) and conscientiousness (C). Regarding the reliability of the questionnaire, the values of the Cronbach's alpha coefficient range from 0.60 (openness to experience) to 0.84 (conscientiousness).

3.3 Statistical methods

Pearson's correlation coefficient measures only linear relationships and should be used primarily for variables with normal distribution. To verify the normality of the data, the Shapiro-Wilk test was applied. Because we did not meet the data distribution normality, we used Spearman's rank correlation coefficient for our research in order to determine dependencies. Hypotheses were tested at a significance level of $\alpha = 0.05$. The IBM SPSS Statistics 24 program (IBM Corp.) was used for the calculations.

4. Results

4.1 Results of correlation analysis

Correlations between the results of the GPP-I and NEO-FFI with age and the length of practice in ACR, were assessed using Spearman's rank correlation coefficient (Table 3 and table 4). Regarding the GPP-I questionnaire, statistically highly significant positive correlations with the length of practice in ACR were found for emotional stability, cautiousness and personal relationship variables. With regards to the NEO-FFI questionnaire, agreeableness and conscientiousness were positively correlated with the length of practice in ACR ($p < .01$). On the other hand, neuroticism and openness correlated negatively with the length of practice ($p < .05$). An even closer relationship was identified between the level of conscientiousness and the age of the respondent ($r = .508, p < .01$), as can be seen in Table 4.

Correlations between the variables of GPP-I and NEO-FFI questionnaires

The bivariate analysis in the first step determined especially significant, negative correlations between neuroticism and most of the variables of the GPP-I questionnaires (Table 5). As can be seen, neuroticism is negatively correlated with self-es-

teem ($r = -.453, p < 0.01$). Therefore, hypothesis 1 is accepted.

In addition, for example, we may also notice a greater number of positive correlations between conscientiousness and the variables of Gordon's questionnaire. Of these, the strongest correlates were found between conscientiousness and vigor ($r = .449, p < .01$), as well as with responsibility ($r = .451, p < .01$).

The following table shows that the observed self-esteem variable in our research sample showed the closest statistical relationships with ascendancy and the least close with sociability.

4.2 Results of regression analyses

Next we focused in more detail on the assessment of the predictive validity of personality factors of NEO FFI with respect to the observed variable self-esteem using the method of multiple regression analysis. The aim was to explain the variance in the dependent variable Y using the statistics R^2 and to estimate the effect of each of the independent variables X on the dependent variable through non-standardized regression coefficients B, controlling the action of other independent variables that enter the model. The value of the standardized Beta coefficient will allow us to compare the de-

Table 3 » Correlation of GPP-I factors with age and the length of practice in the Army of the Czech Republic

Variable	A	R	E	S	SE	C	O	P	V
Age	.178	.184	.236*	-.072	.218*	.406**	.201*	.369**	.238*
Length of practise	.170	.078	.255**	-.105	.168	.280**	.128	.292**	.156

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4 » Correlation of NEO-FFI factors with age and the length of practice in the Army of the Czech Republic

Variable	N	E	O	A	C
Age	-.331**	.177	-.222*	.256**	.508**
Length of practise	-.239*	.137	-.205*	.267**	.322**

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5 » The correlation matrix between GPP-I and NEO-FFI questionnaire variables.

Variable	A	R	E	S	SE	C	O	P	V
N	-.375**	-.298**	-.305**	-.062	-.453**	-.284**	-.217*	-.098	-.313**
E	.366**	.039	-.052	.369**	.341**	.018	.226*	.101	.326**
O	.209*	-.014	-.009	.149	.161	-.281**	.258**	-.143	-.084
A	-.051	.278**	.171	.034	.174	.304**	.031	.316**	.054
C	.107	.451**	.260**	-.026	.335**	.397**	.232*	.278**	.449**

* $p < .05$, ** $p < .01$, *** $p < .001$

→ **Table 6 » Correlation of total self-esteem and its variables**

Variable	Ascendancy	Responsibility	Emotional stability	Sociability
Self-esteem	.740**	.572**	.498**	.437**

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 7 » Results of regression analysis for dependent variables: SE and independent variables: N, E, O, A, C (Model Summary)

Model	R	R ²	Adj. R ²	R ² Ch	F ch	Sig. F Ch
1	.453 ^a	.206	.198	.206	27.687	.000
2	.512 ^b	.262	.248	.057	8.144	.005
3	.555 ^c	.307	.288	.045	6.857	.010

Note: R — coefficient of multiple correlation, R² — index of determination, R² adj. — adjusted index of determination, R² Ch — R Square Change, F Ch — F-test Change, Sig. F Ch — significance for the F-test Change

- a. Predictors: (Constant), N,
- b. Predictors: (Constant), N, O,
- c. Predictors: (Constant), N, O, C,
- d. Dependent Variable: SE

Table 8 » Estimates of regression coefficients

Model	B	SE	β	t	Sig.
1 (Constant)	107.385	1.732		62.018	
N	-.671	.128	-.453	-5.262	.000
2 (Constant)	97.842	3.741		26.156	
N	-.729	.125	-.493	-5.826	.000
O	.422	.148	.241	2.854	.005
3 (Constant)	80.574	7.533		10.697	
N	-.600	.131	-.405	-4.567	.000
O	.486	.146	.278	3.331	.001
C	.369	.141	.235	2.619	.010

gree of influence of individual independent variables. The variables were inserted into the calculation using the Stepwise method (*Criteria: probability of F to enter $\leq .050$, probability of F to remove $\geq .100$*). Significance data identify whether our estimate is the result of a sampling error or not. With the Stepwise method, only variables whose p value is less than .05 enter the model.

Table 7 presents data on the adequacy of the model. The third considered model, formed by the influencing variables neuroticism, openness to experience and conscientiousness, generally explains the largest amount of variance variability 30.7% (R²). Another basic output from the regression analysis is a table of regression coefficients (Table 8).

The results confirmed the findings derived from the results of the correlation analysis. The highest values in terms of comparison of standardized Beta coefficients with each other in the model were reached by the neuroticism factor, which explained 40.5% of the variability of the variance of the dependent variable. Therefore, hypothesis 2 is accepted.

5. Discussion

Research has shown several contexts. High self-esteem individuals tend to be extraverted, agreeable, conscientious, emotionally stable, and open to experience. In the search for potential mediators of this general formula, our results suggested that these relationships may be mediated by the age and practical experience of respondents in the armed forces.

With age, but also with the length of practice, conscientiousness increased in our research group. We could perceive this to some extent in the context of a higher degree of caution, as can be seen from the results. With increasing neuroticism, self-esteem decreased. This could be related to a lower level of emotional stability as well as lower ascendancy and vigor, which is evident from the negative correlations. These are important factors that influence stress management and may be related to the psychological resistance of commanders-managers, on which we should focus research in our opinion in the future. There is strong evidence (Maddi et al., 2002) that a measure of the ability to cope with the burden has a negative correlation with the NEO-FFI neuroticism factor and has a positive correlation with the other factors of the Big Five model.

A significant positive correlation between length of practice and level of conscientiousness could be consistent with the findings of McCrae et al. (2000), who stated that conscience increases significantly with the age of the respondent. The proven correlation of the length of practice and age of the respondent with the level of conscientious-

ness is not surprising. A person with high conscientiousness tends to plan activities for longer periods of time with the aim of bringing them to a conclusion, requiring certain prospects in decision-making and self-control. The first hypothesis was accepted in our research study. Neuroticism proved to be significantly negatively correlated with the level of self-esteem. These results are shown in accordance with the results of the survey performed by Amirazodi and Amirazodi (2011) and our research has come to similar findings as the above-mentioned study of Klimusová et al. (2014, in Blatný et al., 2014). The research carried out in our armed forces confirmed, albeit indirectly, the results of Pospíšil's research (2016), carried out on a sample of 130 ACR respondents, including military students of the University of Defence. The overall level of assessment of their military service in a positive linear relationship statistically significantly correlated with high self-confidence (self-esteem) and psychic stability, i.e. in the opposite direction to psychological lability (neuroticism). According to McCrae and Costa (1999), low emotional stability is represented by low self-esteem. It is an inversion of neuroticism that is associated with insecurity, anger, anxiety, and depression that can hinder work (Barrick and Mount, 1991).

To determine the independent effects of the Big Five on self-esteem, we performed a multiple regression analysis in which self-esteem was predicted by three dimensions (N, O, C). Together accounted for 30.7% of the variance in self-esteem. Neuroticism (β -40.5%) had the greatest effect in the negative direction, followed by openness (β 27.8%) and conscientiousness (β 23.5%) in the positive direction. The results of the regression analysis thus more or less confirmed the already indicated conclusions from the correlation analysis. Especially in neuroticism, it turns out that it could be a very important predictor for self-esteem.

On closer inspection, we noticed that of the variables that saturate self-esteem scores, the ascendancy variable is most positively related to them. →

→ We can assume that in a military environment, commanders-managers are a very important variable that could be more important than other variables of self-esteem compared to the civilian environment. It would be interesting to make this comparison in the future. Furthermore, it can be assumed that the result could also reflect a certain influence of the acquired skills and the necessary practical experience from the management and leadership of subordinates in the ACR. For military managers, this demonstrates the need to develop active skills in decision-making processes in terms of their professional competencies, but also the need to develop communication skills and support future managers to be more competitive. All of this can help gain ascendancy over other military professionals.

6. Strengths and limitations

Our cross-sectional results cannot be irreversible. It would be more appropriate to use a longitudinal study. The limitation of the research is also that the research file cannot be considered representative. The attempt to achieve representativeness, which would allow wider application of results, was limited by organizational and time considerations.

If questionnaire methods are used, depending on the self-assessment of the respondent, distortions may occur. This distortion may be related to the nature of the military environment, not to show weakness. Respondents may feel threatened despite the anonymity guarantees.

Perhaps from the perspective of the future development of commanders-managers, we could notice several important findings that, for example, conscientiousness increases with age. This conclusion should be reached through a longitudinal study. Nor can it be clearly stated that conscientiousness increases significantly with the length of practice. There may be a factor of choice in that those soldiers who proved less conscientious were either not among those who were chosen as commanders or dropped out of the army themselves.

However, this limitation could be similarly applied to most other personality variables, whose relationships we researched in our study, such as that neuroticism decreases with age and length of practice, etc.

The generalization of results was also demographically reduced (only 6.4 % of females were represented in the research group). This, however, corresponds approximately to the numerical distribution of males and females in the ACR.

We did not examine other variables that, in addition to the Big Five factors, could have influenced the explanation for self-esteem. We believe that these variables may include, for example, anxiety or depression, which could be the focus of further research.

7. Conclusions

Research has shown that individuals with high self-esteem can be described as a specific set of Big Five characteristics. The Big Five dimensions together represent only 30.7 % of the variance of self-esteem, suggesting that almost 69 % of the variance can be explained by other variables. Of course, the remaining variances can also be caused by measurement errors.

It cannot be ruled out that individuals with high self-esteem may intentionally hide their personality deficiencies and try to present their strengths in line with expectations of an ideal commander-manager. So it does not always have to be a real personality characteristic. In this context, Robins et al. (2001) point out that some individuals who score in high self-esteem can only really defend themselves against their implicit feelings of inadequacy.

The practical implications of this research can lead to strategies that improve students' self-esteem if teachers consider ways to enhance this personality trait, such as motivation or stress reduction. In addition, it can be an inspiration for student intervention programs that will aim to strengthen students' personal integrity and reduce school failure.

The results above indicate that some variables of NEO-FFI and GPI-I significantly change with age and the length of practice. The pattern of this change could be further analyzed on a large sample using multivariate statistical methods, especially Factor analysis. The findings obtained can be viewed as confirmation of the necessity for long-term systematic training in the area of burden management in the context of military training. Application possibilities of research results may consist in the identification of personality dispositions for successful performance of the military profession, improvement of the system of training and education of military professionals (programs, methods, forms), further focusing on the development of personality dimensions and managerial skills that demonstrably contribute to stress management and, in addition, it also offers more efficient selection of studies at the University of Defense in the prediction of suitable applicants.

The development of adult personality through personality traits in the context of university education can be questioned. However, there is evidence that this can be achieved, for example, through manipulation (Robins et al., 2005) or through the use of student-centered learning. Such learning is different from the still prevalent frontal

teaching in schools because it is active, cooperative and involves problem solving (Benninga et al., 2006). For military managers, the strength of the correlation of ascendancy to the variable self-esteem indicated the importance of their active skills in decision-making processes and also showed the continuing need to develop communication skills.

Individuals high in neurotic tendencies are less likely to display hopeful tendencies and are negatively associated with well-being. Personality can sometimes be flexible and measuring the Big Five personality for individuals as they enter certain stages of life may predict their educational identity. Educators should keep in mind that individuals' personality traits affect their educational identity, their specific personality learning style, and other important aspects that contribute to overall personality development.

In the follow-up research, we recommend conducting research with military students of the University of Defense in Brno using the same psychological methods as were applied in our research study and making a comparison. Given that the ACR has been operating in NATO for many years, it would certainly be interesting to make comparisons at this level as well.

REFERENCES

- [1] AMIRAZODI, F., AMIRAZODI, M.: Personality traits and Self-esteem. *Procedia – Social and Behavioral Sciences*, 2011, 29, pp. 713–716.
- [2] BACHMAN, J. G., O'MALLEY, P. M.: Self-esteem in young men: A longitudinal analysis of the impact of educational and occupational attainment. *Journal of Personality and Social Psychology*, 1977, 35, pp. 365–380.
- [3] BARRICK, M., MOUNT, M.: The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 1991, 44(1), pp. 1–26.
- [4] BENNINGA, J. et al.: Character and academics: what good schools do? *Phi Delta Kappa*, 87(6), pp. 448–452.
- [5] BETZ, N., BORGES, F.: Relationships of the Big Five personality domains and facets to dimensions of the healthy personality. *Journal of Career Assessment*, 2010, 18(2), pp. 147–160.
- [6] BRADLEY, J. P. et al.: Personality correlates of leadership development in Canadian Forces officer candidates. *Canadian Journal of Behavioural Science*, 2002, 34(2), pp. 92–103.
- [7] CARVER, C. S., SCHEIER, M. F.: *On the Self-Regulation of Behavior*. New York: Cambridge University Press, 1998.



- [8] CATTELL, R. B.: Advances in Cattellian personality theory. In *Handbook of Personality: Theory and Research*. New York: The Guilford Press, 1990, pp. 101–110.
- [9] COSTA, P. T., MCCRAE, R. R.: The revised NEO personality inventory (NEO-PI-R). In *The SAGE Handbook of Personality Theory and Assessment. Personality Measurement and Testing*. Thousand Oaks: Sage Publications, 2008, pp. 179–198.
- [10] CHAMORRO-PREMUZIC, T., FURNHAM, A.: *Personality and Intellectual Competence*. Hove: Psychology Press, 2005.
- [11] DERUE, D. S. et al.: Trait and behavioral theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology*, 2011, 64(1), pp. 7–52.
- [12] DÖRR A.: *Estudio comparativo de autoconcepto en niños de diferente nivel socio económico (tesis sin publicar)*. Santiago de Chile: Universidad De Chile, 2005.
- [13] DURLAK, J. A. et al.: The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. *Child Development*, 2011, 82(1), pp. 405–432.
- [14] EISENBARTH, C.: Does self-esteem moderate the relations among perceived stress, coping, and depression? *College Student Journal*, 2012, 46(1), pp. 149–157.
- [15] GOLDBERG, L. R., ROSOLACK, T. K.: The Big Five factor structure as an integrative framework: An empirical comparison with Eysenck's PEN model. In *The Developing Structure of Temperament and Personality from Infancy to Adulthood*. Hillsdale: Erlbaum, 1994, pp. 7–35.
- [16] GORDON, L. V.: *Gordonův osobnostní profil – Inventorium*. Brno: Psychodiagnostika, 1999.
- [17] GREENE-SHORTRIDGE, T. M., BRITT, T. W., CASTRO, C. A.: The stigma of mental health problems in the military. *Military Medicine*, 2007, 172, pp. 157–161.
- [18] HANNAH, S. T., AVOLIO, B. J.: The locus of leader character. *The Leadership Quarterly*, 2011, 22(5), pp. 979–983.
- [19] HOGAN, R., CURPHY, G., HOGAN, J.: What we know about leadership: effectiveness and personality. *American Psychologist*, 1994, 49(6), pp. 485–504.
- [20] HOLDEN, C. et al.: Unstable self-esteem: using the temporal stability of self-esteem to better understand feelings of self-worth. In *Handbook on the Psychology of Self-Esteem*. New York: Nova Science Publisher, 2014, pp. 1–10.
- [21] HŘEBÍČKOVÁ, M., URBÁNEK, T.: *NEO pětifaktorový osobnostní inventář: podle NEO Five-Factor inventory P. T. Costy a R. R. McCrae*. Praha: Testcentrum, 2001.
- [22] HUGHES, B. E., SCHELL, W. J., TALLMAN, B.: Development of leadership self-efficacy: comparing engineers, other STEM, and non-STEM majors. In *2018 IEEE Frontiers in Education Conference*. Piscataway: Institute of Electrical and Electronics Engineers, 2018, pp. 1–5.
- [23] JACKSON, L. A., GERARD, D. A.: Diurnal types, the “Big Five” personality factors, and other personal characteristics. *Journal of Social Behavior and Personality*, 1996, 11, pp. 273–283.
- [24] JOHNSON, J. L., HILL, W. R.: Personality traits and military leadership. *Individual Differences Research*, 2009, 7, pp. 1–13.
- [25] JUDGE, T. A. et al.: Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 2002, 87(4), pp. 765–780.
- [26] KELLER, T.: Images of the familiar: Individual differences and implicit leadership theories. *The Leadership Quarterly*, 1999, 10, pp. 589–607.
- [27] KENDLER, K. S., GARDNER, C. O., PRESCOTT, C. A.: A population-based twin study of self-esteem and gender. *Psychological Medicine*, 1998, 28(6), pp. 1403–1409.
- [28] KHORAKIAN, A., SHARIFIRAD, M. S.: Integrating implicit leadership theories, leader-member ex-

- change, self-efficacy, and attachment theory to predict job performance. *Psychological Reports*, 2019, 122(3), pp. 1117–1144.
- [29] KING, K. A. et al.: Increasing self-esteem and school connectedness through a multidimensional mentoring program. *Journal of School Health*, 2002, 72(7), pp. 294–299.
- [30] KIRKPATICK, S. A., LOCKE, E. A.: Leadership: do traits matter? *Academy of Management Perspectives*, 1991, 5(2), pp. 48–60.
- [31] KLIMUSOVÁ, H. et al.: Psychometrické vlastnosti dotazníku GPP-I: Vliv formátu odpovědí. In *Sociální procesy a osobnost 2013. Včera, dnes a zítra. Sborník příspěvků 16. ročníku mezinárodní konference*. Brno: Psychologický ústav AV ČR, 2014, s. 154–160.
- [32] KWAN, V. S. Y., BOND, M. H., SINGELIS, T. M.: Pancultural explanations for life satisfaction: Adding relationship harmony to self-esteem. *Journal of Personality and Social Psychology*, 1997, 73, pp. 1038–1051.
- [33] LARSON, C., LaFASTO, F.: *Team Work, What Must Go Right What Can Go Wrong*. Newbury Park: Sage, 1989.
- [34] LYRAKOS, D. G.: The impact of stress, social support, self – efficacy and coping on university students, a multicultural European study. *Psychology*, 2012, 3(2), pp. 143–149.
- [35] MADDI, S. R. et al.: The Personality construct of hardiness: relationships with comprehensive tests of personality and psychopathology. *Journal of Research in Personality*, 2002, 36(1), pp. 72–85.
- [36] MAGELINSKAITĖ-LEGKAUSKIENĖ, Š., LEGKAUSKAS, V., KEPALAITĖ, A.: Teacher perceptions of student social competence and school adjustment in elementary school. *Cogent Psychology*, 2018, 5(1), Article 1421406.
- [37] MANN, R. D.: A review of the relationships between personality and performance in small groups. *Psychological Bulletin*, 1959, 56(4), pp. 241–270.
- [38] MARINO, C. et al.: Can mentoring promote self-esteem and school connectedness? An evaluation of the Mentor-UP project. *Psychosocial Intervention*, 2020, 29(1), pp. 1–8.
- [39] MCCRAE, R., COSTA, P.: A five-factor theory of personality. *Handbook of Personality: Theory and Research*, 1999, 2, pp. 139–153.
- [40] McCRAE, R. R. et al.: Nature over nurture: Temperament, personality, and life span development. *Journal of Personality and Social Psychology*, 2000, 78(1), pp. 173–186.
- [41] MISETICH, M., DELIS-ABRAMS, A.: Your self-esteem is up to you. *Self-Growth*, 2003. [online]. Available from: <<http://www.selfgrowth.com/articles/Abrams1.html>>.
- [42] MOSCOSO, S., IGLESIAS, M.: Job experience and big five personality dimensions. *International Journal of Selection and Assessment*, 2009, 17(2), pp. 239–242.
- [43] MULLEN, P. R. et al.: Emotional intelligence and leadership attributes of school counsellor trainees. *Counsellor Education and Supervision*, 2019, 58(2), pp. 112–126.
- [44] O'NEILL, T., KLINE, T.: Personality as a predictor of teamwork: A business simulator study. *North American Journal of Psychology*, 2008, 10(1), pp. 65–78.
- [45] PARK, H. H., FAERMAN, S.: Becoming a manager: learning the importance of emotional and social competence in managerial transitions. *The American Review of Public Administration*, 2019, 49(1), pp. 98–115.
- [46] PLATT, J. J., EISENMAN, R., DARBES, A.: Self-esteem and internal-external control: A validation study. *Psychological Reports*, 1970, 26, pp. 161–162.
- [47] POSPÍŠIL, R.: *Pedagogicko-psychologické aspekty úspěšnosti přípravy a vzdělávání vojenských profesionálů v kontextu zvládnání zátěže*. (Disertační práce). Univerzita Palackého v Olomouci. Filozofická fakulta, 2016.



- [48] ROBINS, R. W., HENDIN, H. M., TRZESNIEWSKI, K. H.: Measuring global self-esteem: Construct validation of a single item measure and the Rosenberg Self-Esteem scale. *Personality and Social Psychology Bulletin*, 2001, 27, pp. 151–161.
- [49] ROBINS, R. W. et al.: Personality correlates of self-esteem. *Journal of Research in Personality*, 2001, 35(4), pp. 463–482.
- [50] ROBINS, R. W., et al.: Do people know how their personality has changed? Correlates of perceived and actual personality change in young adulthood. *Journal of Personality*, 2005, 73, pp. 489–522.
- [51] ROSENBERG, M.: *Conceiving the Self*. New York: Basic Books, 1979.
- [52] ROSENBERG, M. et al.: Global self-esteem and specific self-esteem: different concepts, different outcomes. *American Sociological Review*, 1995, 60(1), pp. 141–156.
- [53] SELIGMAN, M. E. P. et al.: Depressive attributional style. *Journal of Abnormal Psychology*, 1979, 88, pp. 242–247.
- [54] SINGER, J. A., SALOVEY, P.: *The Remembered Self: Emotion and Memory in Personality*. New York: Free Press, 1993.
- [55] SHAVER, P. R., COLLINS, N., CLARK, C. L.: Attachment styles and internal working models of self and relationship partners. In *Knowledge Structures in Close Relationships: A Social Psychological Approach*. Mahwah: Erlbaum, 1996, pp. 25–61.
- [56] SCHAUBROECK, J., GANSTER, D. C.: Chronic demands and responsivity to challenge. *Journal of Applied Psychology*, 1993, 78(1), pp. 73–85.
- [57] STOGDILL, R. M.: Personal factors associated with leadership: a survey of the literature. *The Journal of Psychology*, 1948, 25(1), pp. 35–71.
- [58] STOGDILL, R. M.: *Handbook of Leadership: A Survey of Theory and Research*. New York: Free Press, 1974.
- [59] TANGNEY, J. P., FISCHER, K. W.: *Self-Conscious Emotions: The Psychology of Shame, Guilt, Embarrassment, and Pride*. New York: Guilford, 1995.
- [60] VIDIC, Z. et al.: Emotional and motivational correlates of leadership styles: a comprehensive framework for understanding effective Leaders. *Journal of Leadership Studies*, 2016, 10(3), pp. 22–40.
- [61] WELLINS, R., BYHAM, W., WILSON, J.: *Empowered Teams: Creating Self-Directed Work Groups that Improve Quality, Productivity, and Participation*. San Francisco: Jossey-Bass, 1991.
- [62] WRIGHT, T. A., GOODSTEIN, J.: Character is not “dead” in management research: a review of individual character and organizational-level virtue. *Journal of Management*, 2007, 33(6), pp. 928–958.
- [63] WRIGHT, T. A., QUICK, J. C.: The role of character in ethical leadership research. *The Leadership Quarterly*, 2011, 22(5), pp. 975–978.

Relationships between Personality Traits of Military Professionals – Managers with a Focus on Self-Esteem

ABSTRACT

The aim of the research was to find out the relationships between selected personality traits of military professionals – managers in the Army of the Czech Republic with a focus on self-esteem in the context of their development. The research group consisted of 109 respondents in command and management positions. The author of the research performed correlation and regression analysis. Selected variables of the five-factor personality questionnaire NEO-FFI and Gordon's personal profile – inventory were used to verify the hypotheses. The hypotheses confirmed the statistically significant relationships between self-esteem and neu-

roticism. At the end of the research study are presented some recommendations for the future development of leaders and managers.

KEYWORDS

Self-esteem; personality traits; military professionals-managers; development; neuroticism

JEL CLASSIFICATION

H55; E43; I22

x

Změna chování zákazníka v době „koronavirové“

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* 1. Úvod

V České republice (ČR) v roce 1989 nastala politická změna a pád totalitního režimu. Tím byla zahájena nová éra, propojení hospodářství a ekonomiky s celým světem. Následně po vstupu ČR do Evropské unie v roce 2004 se stala ČR součástí globálního světa. Došlo k postupnému zvyšování životní úrovně a nastala důležitá změna ve změně nabídky a poptávky po zboží a službách. Propojením celého světa má zákazník (spotřebitel) volbu výběru z téměř neomezené možnosti nabídky a možnost realizovat svoje nákupy.

V totalitní době převyšovala poptávka po zboží a službách nabídku. Dnes převyšuje nabídka poptávku. Avšak na „jaře 2020“ došlo k mimořádné události, kterou nikdo neočekával a nikdo nebyl připraven. Změnila se poptávka neočekávaným způsobem. Na přelomu roku 2019/2020 jsme byli svědky mimořádné zdravotnické události, která má vliv na psychologii chování zákazníka, a to v rámci nabídky, poptávky i změny globálního trhu. Dne 31. 12. 2019 čínský Wu-chan oznámil ohnisko pneumonie neznámé příčiny ohrožující veřejné zdraví. Dne 11. 02. 2020 Světová zdravotnická organizace (WHO) označila onemocnění jako Covid-19. Dne 11. 03. 2020 prohlásila WHO šíření koronaviru za pandemii (WHO, 2020; MZ ČR, 2020).

Zákaznické a spotřebitelské chování bylo změněno. V době pandemického onemocnění Covid-19 i globální trh změnil svoje chování. Došlo k uzavření hranic i „nebe“. Byla dočasně zastavena letecká, námořní i pozemní přeprava. Byla uzavřena přeshraniční práce tzv. „pendleři“. Nejdůležitějším bodem mezinárodních jednání bylo zajištění základních ochranných potřeb pro lékaře, zdravotnický personál a obyvatelstvo napříč zeměmi, které s pandemií bojovalo. Vlády jednotlivých států použily státní finanční rezervy. Lidé poptávali pouze základní nezbytné výrobky.

Zákazník (spotřebitel) je ovlivňován reklamou. Obchod je reklamou provázen od dávných dob. Nebývalý rozvoj reklamy je způsoben velkým množstvím výrobků a služeb, které jsou v současné době nabízeny. Reklama psychologicky ovlivňuje chování zákazníků (spotřebitelů) a dle jejich vlastních preferencí a finančních možností ovlivňuje i jejich nákupní chování. I v této oblasti došlo z důvodu onemocnění Covid-19 k nebývalé situaci, reklamu a reklamní agentury nikdo nepotřeboval. Za posledních třicet let je velká pozornost věnována ochraně životního prostředí a vlivu spotřebitelského chování obyvatel celé planety na zhoršení životního prostředí. Lidé pro zlepšení životního prostředí nakupují do látkových obalů, snížili objemy nákupů balených vod v plastových obalech, preferují sklo. Vlády, neziskové organizace i lidé

ochraňují životní prostředí a environmentálním vzděláváním vedou sebe i budoucí generace k lásce a ochraně života na Zemi.

Cílem tohoto příspěvku je seznámit se změnou chování zákazníka, která nastala na jaře 2020 (tzv. doba „koronavirová“). Důvodem bylo rozšíření pandemického onemocnění Covid-19 po celém světě. V příspěvku budou k vývoji situace ilustrované změny v obrázcích a tabulkách. Součástí příspěvku bude vlastní průzkum.

2. Zákazník (spotřebitel)

Zákazník je člověk nebo firma, který poptává zboží za účelem nakoupit. Svoje nákupy plánuje podle svých finančních možností. Vzhledem ke globálnímu velkému trhu má zákazník množství nabídek, na základě kterých se rozhoduje. *Trh definujeme jako skupinu spotřebitelů nebo firem, která by mohla požadovat uspokojení určité potřeby* (Kotler a Trias de Bes, 2005, s. 38). Porovnává ceny a na nákupy se připravuje.

Někteří zákazníci nakupují strategicky, nejdříve zjistí možnosti na trzích, potom se rozhodují a teprve potom nakoupí. Jiní zákazníci nakupují stejné nebo osvědčené produkty. Také prostředí a emoce hrají významnou roli při nákupním chování zákazníků. Záleží, v jakém prostředí zákazník nakupuje, kdo ho obsluhuje, co mu nabídne, jak se k němu chová. Zda dodrží základní zásady prodávajícího (nabízejícího) služby či zboží jako je *aktivost, respekt, zdvořilost a vřelost* (Horrel, 2007, s. 15). Záleží i na tom, v jaké životní situaci se člověk nachází. Zda nakupuje s radostí třeba dárky anebo i potraviny, že uvaří dobré jídlo anebo opačně, zda nakupuje z nezbytné nutnosti s omezeným rozpočtem. Při těchto nákupech se projevují emoce, a to pozitivní i negativní.

Je obtížné předvídat chování zákazníků (spotřebitelů). Na nakupování mají vliv i geografické symboly, sociální postavení, etnika i pohlaví a věk nakupujícího. Nákup výrobku může symbolizovat geografickou identifikaci např. veselé zbarvení šatů, volné oblečení, prostě identifikovat se např.

se slunnými oblastmi (Hoyer, Macinnis a Pieters, 2018, s. 433). Spotřebitel je zákazník, který nakupuje a zároveň spotřebuje. Ať už se jedná o jednotlivce nebo firmy. *Spotřebitelské chování odráží souhrn spotřebitelských rozhodnutí s ohledem na pořadí, spotřebu, nakládání se zbožím, službami, činnostmi, zkušenostmi, lidmi a lidskými nápady a jejich rozhodováním v průběhu času.* (Hoyer, Macinnis, Pieters, 2018, s. 5). Zákazník (spotřebitel) uspokojuje svoje potřeby, udělá si radost anebo radost druhému, nakoupí za výhodnou cenu, uspokojí svoje sny, komunikuje při nákupech a sdílí určitý sociální prostor.

V poskytování servisu zákazníkům došlo k velkému rozvoji (Horky, 2018, s. 22). *V roce 1800 lidé nakupovali pouze od místních důvěryhodných obchodníků, v roce 1876 byl již používán telefon, díky kterému se zákazníci spojovali s celým světem, v roce 1960 vznikala call centra ke snížení nákladů pro služby zákazníkům, v roce 1970 byla vynalezena automatická hlasová odezva a došlo k oddělení mezi společnostmi a zákazníky, v roce 1990 funguje spojení přes email včetně chatu, v roce 2010 zákazníci využívají internetovou komunikaci, v roce 2020 informační technologie vyzývají lidstvo, aby se zaměřilo na empatii a řešení problémů ostatních lidí, predikce na rok 2050 transhumánní věk, kdy počítače překonají lidskou inteligenci* (Horky, 2018, s. 22–30). Na „jaře 2020“ došlo k mimořádné události v souvislosti onemocnění Covid-19 a skutečně zákazníci využívali informační technologie zaměřené na empatie, k řešení problémů ostatních lidí a vzájemnou pomoc při šití roušek, shánění nedostupných pomůcek a dezinfekcí pro ochranu zdraví proti onemocnění Covid-19, což Horky již v roce 2018 předvídal (Horky, 2018, s. 29).

2.1 Zákaznické (spotřebitelské) chování

Zákaznické (spotřebitelské) chování se týká každého člověka na planetě a popisuje, co lidé nakupují, a jakým způsobem k nákupům přistupují. Zákaznické chování nám objasňuje, jaké nákupy jsou nejčastější a jakých typů osob se týkají. Do tohoto



chování vstupují psychologické aspekty, které mají na zákazníka vliv při rozhodování o koupi. Chování zákazníků (spotřebitelů) se různě mění vlivem nabídky, vlivem věku, vlivem sociálního prostředí, ve kterém zákazník žije, vlivem vlastní osobnosti, vlivem životní etapy, ve které se zákazník nachází (dítě, dospívající, dospělý žijící u rodičů, dospělý žijící sám, manželé), vlivem finanční situace (s vysokými příjmy v produktivním věku, lidé s nízkými příjmy, invalidní nebo starobní důchodci) a dalšími faktory mající vliv na chování a rozhodování zákazníků (spotřebitelů). Rozhodování zákazníků závisí také na motivaci ke spotřebě, co nám nákup přinese, zákazník se rozhoduje, kde a za kolik nakoupí, vyhledává ke svému nákupu informace. Vyhledává informace v inzerci, v reklamních letáčích. Jedná-li se o strategické nabídky nebo poptávky např. pro firmu, zákazník oslovuje reklamní agentury. Připravuje nabídku svých výrobků nebo služby. V případě nákupu denní spotřeby jedná zákazník většinou obvykle, zná svoji denní spotřebu a rozhodování je obligátní. Nákupní chování se může změnit, změní-li se prostředí, ve kterém se nakupuje. Jistě zákazníka ovlivní místo prodeje, doporučení od rodinných příslušníků či známých, nákupy po internetu s dodávkou až do místa bydliště, nabídkové časopisy z obchodních domů nebo prodej spojený se společensko-emočním zážitkem. Mimořádné prostředí, pozitivně naladěný prodávající, ovlivňuje nákupy. *Pozitivní emoce, jako vstřícnost a zaujetí, by se mohly používat mnohem častěji, než je obecná praxe. Vstřícnost napomůže navodit příjemnou atmosféru* (Clegg, 2017 s. 41). Také non-verbálními prostředky se vyjadřují emoce. *Štěstí, potěšení, pohoda, překvapení strach, smutek, hněv, znechucení a emocemi doprovázený zájem o něco, zvědavost* (Vybíral, 2005, s. 91).

Rozlišujeme nákupy extenzivní, impulzivní, limitované a nákupy zvyklostní (Vysekalová, 2011, s. 55). Extenzivním nákupem se rozumí nákup, kdy kupující neví, co bude nakupovat a vyhledává informace. Impulzivní nákup je momentální okamžité rozhodnutí podle situace, ve které se kupující nachází. Pro limitovaný nákup je charakteristické,

že výrobek neznáme, ale vycházíme z obecných zkušeností. Rutinní nákup dle zvyku zákazníka je každodenní nákup potravin a nutných potřeb dle zvyku kupujícího – zvyklostní nákup (Vysekalová, 2011, s. 55).

2.2 Reklama, reklamní agentury a její vliv na nákupní chování

Reklama ovlivňuje zákazníky, popisuje výrobek nebo službu, vyzdvihuje dobré vlastnosti nabízeného výrobku nebo služby, snaží se o upoutání pozornosti zákazníka (spotřebitele). Aby reklama zapůsobila na konečného zákazníka (spotřebitele) měla by být jednoduchá, srozumitelná, mnohdy šokující a pro zákazníka rychle zapamatovatelná, oslovit zákazníka tak, aby ihned zareagoval. *Vytváří emocionální pouto* (Kaputa, 2011, s. 30).

Říká se, že „obal prodává“. Avšak existuje studie zabývající se výzkumem spotřebitelských trhů, která zkoumala, jak preference z dětství utváří naše nákupní návyky v dospělosti. *SIS International Research v New Yorku uspořádala anketu mezi 2035 dětmi a dospělými a zjistila, že 53 % dospělých a 56 % adolescentů užívá značky, které si pamatují z dětství, zvláště pokud jde o potraviny, nápoje, hygienické a spotřební zboží a výrobky pro domácnost* (Lindstrom, 2012, s. 26). *Reklama zahrnuje i užitnou hodnotu výrobku, jeho design a obal, distribuční a prodejní místa, sortiment zboží a služby, cenovou politiku* (Vysekalová, 2012, s. 144).

S rozvojem globálních trhů zaujímá reklama při nabídce výrobků a služeb významné postavení v ovlivňování zákazníků z celého světa. *Odhady nákladů na reklamu říkají, že z 374 milionů Kč v roce 1990 vzrostly náklady na reklamu na 13 miliard korun v roce 1999* (Vysekalová, 2012 s. 17). Tento nárůst naznačuje, že reklama působí na nákupní chování zákazníků a vyplatí se do ní investovat. Slovo „reklama“ vzniklo pravděpodobně z latinského *reklamare* – znovu křičeti, což odpovídalo dobové „obchodní komunikaci“ (Vysekalová, 2012, s. 20). *Tomu odpovídá i definice reklamy schválená*

Parlamentem ČR v roce 1995, která říká, že „reklamou se rozumí přesvědčovací proces, kterými jsou hledání uživatelé zboží, služeb nebo myšlenek prostřednictvím komunikačních médií“. Jde o placené zprávy, které využívají jednotlivá média k dosažení cílové skupiny (Vysekalová, 2012, s. 21).

Reklamní agentury začaly vznikat již v 19. století ve světě, ale i v době totality v ČR existovaly reklamní agentury. Avšak po „sametové revoluci“ v ČR nastal velký rozvoj v oblasti reklamy. Firmy i živnostníci nabízejí svoje produkty různými formami např. inzeráty v tisku, televizní reklamou i reklamou v kinech, v rádiích, na billboardech, na internetu i sociálních sítích. *V roce 2010 vyhledávalo informace o zboží a službách 81 % uživatelů internetu starších 16 roků (Vysekalová, 2012, s. 278).* Reklamní agentury se podílejí na vzniku reklamy v její skutečné podobě.

2.3 Ochrana životního prostředí

Ochrana životního prostředí úzce souvisí s nákupním chováním zákazníků (spotřebitelů). Chránit životní prostředí je v moderní společnosti trendem a jedná se o činnost lidí vedoucí k zajištění a ochraně omezených přírodních zdrojů. Je také i veřejným zájmem a odpovědností státu a municipalit zachovat přírodní bohatství pro další život na Zemi. *Životním prostředím je vše, co vytváří přirozené podmínky existence organismů včetně člověka a je předpokladem jejich dalšího vývoje. Jeho složkami jsou zejména ovzduší, voda, horniny, půda, organismy, ekosystémy a energie (Zákon č. 17/1992 Sb., § 2).*

Každý výrobek, který je prodáván a spotřebováván, vytváří odpad. Odpad musí být likvidován a je zpoplatněn. Pro ochranu životního prostředí a udržitelný rozvoj je nezbytné snižovat tvorbu odpadů. *Trvale udržitelný rozvoj společnosti je takový rozvoj, který současným i budoucím generacím zachovává možnost uspokojovat jejich základní životní potřeby, a přitom nesnižuje rozmanitost přírody a zachovává přirozené funkce ekosystémů (Zákon č. 17/1992 Sb., § 6).* Proto jsou lidé informováni a environmentálně vzděláváni ke snižování vzniku odpadů a ochraně životního prostředí. V současnosti zákazníci (spotřebitelé) již ve velké míře tendují ke snižování jednorázových plastových obalů a vrací se k nákupům do vlastních látkových sáček, tašek a skla.

3. Změny v chování zákazníka v době „koronavirové“

Náкупní chování zákazníků se změnilo již v únoru 2020 v důsledku vyhlášení nouzového stavu v ČR z důvodu celosvětové pandemie onemocnění Covid-19. Zákazníci (spotřebitelé) začali především nakupovat rychloobrátkové zboží, léky, dezinfekční prostředky a materiály na šití ochranných pomůcek (roušek). Zákazníci i spotřebitelé dramaticky změnili svoje nákupní chování. Běžné denní nákupy se změnilly v předzásobení potravinami a nezbytným zbožím určeným pro chod domácností. Asi 60 % domácností potvrdily, že nakupují více trvanlivých potravin než obvykle [13].

Nákupy od konce února 2020 z důvodů pandemie onemocnění Covid-19 způsobily „nákupní ho-

V České republice v roce 1989 nastala politická změna a pád totalitního režimu. Tím byla zahájena nová éra, propojení hospodářství a ekonomiky s celým světem. Následně po vstupu ČR do Evropské unie v roce 2004 se stala ČR součástí globálního světa. Došlo k postupnému zvyšování životní úrovně a nastala důležitá změna ve změně nabídky a poptávky po zboží a službách. Propojením celého světa má zákazník volbu výběru z téměř neomezené možnosti nabídky a možnost realizovat svoje nákupy.

→ rečku“, která převyšovala asi o 40 % období obvyklé „nákupní horečky“ před Vánoce či Velikonoce. Mezi nejrychleji rostoucí tržby patřily dezinfekční prostředky na ruce (o více než 700 %), vlhčené ubrousky (o více než 400 %), dezinfekční prostředky na prádlo (o více než 300 %), kypřicí přísady (více než 200 %), základní trvanlivé potraviny i do zásoby (Nielsen, 2020).

3.1 Změna chování zákazníka

Na jaře roku 2020 z důvodu vyhlášení pandemického onemocnění Covid-19 dochází ke změně i na straně nabídky. Mnoho firem, institucí i domácností tzv. „ze dne na den“ změnilo svoje postoje a soustředily se na zvýšení produkce požadovaného zboží (výroba roušek, respirátorů, desinfekčních prostředků). Nabízené požadované zboží změnilo závislost na ceně a změnilo chování zákazníka (ať to byl jednotlivec nebo stát), cena zboží nebyla na prvním místě. Poptávka ovlivňovala nabídku. Nikdo se nezajímal o reklamní nabídky.

Došlo ke zpomalení ekonomiky. *Například na trhu ropy z důvodu onemocnění Covid-19 poklesla cena ropy o 65 %. Dne 20. 4. 2020 je zapsán jako nejhorší den v historii ropných trhů. Situace vyústila v masivní tlak na pokles ceny ropy za barel [12].* Cena ropy klesla dokonce na nulovou úroveň a tzv. „prodávající musel zaplatit kupujícímu“, aby koupil. Je to v historii první situace, které „trh ropy“ čelí. V současné době se těží více ropy, než je potřeba. Vyplatí se ropu skladovat do doby, než se její cena zvýší. To sebou přináší problematiku nedostatku skladovacích prostor pro barely ropy.

3.2 Změna, která nastala na trhu reklamních agentur

V době „koronavirové“ se komunikace mezi lidmi přes sociální sítě mnohonásobně zvýšila. Avšak ne v oblasti marketingu a reklamy, jak ji známe do března 2020. Změna nastala ve smyslu pomáhat si vzájemně poskytováním příspěvků o nejn nutnějších a základních potřebách lidí a uživatelů těchto

sítí. Jednalo se o příspěvky šití roušek, sdílení různých receptů na vaření, příspěvky pro domácí kutily, drobné opravy domácností, výroba dekorace, domácí cvičení, výuka žáků a studentů, zábava pro děti, emoční linky pro potlačení strachu a nejistoty. O reklamu neměl nikdo zájem, najednou byla zbytečná. Reklamní agentury přestaly „ze dne na den“ provozovat svoji činnost.

Pro tento příspěvek byl proveden telefonický průzkum náhodně vybraných reklamních agentur z jedenácti měst České republiky. Jednalo se o reklamní agentury s ročním obratem přes milion korun, pouze tři reklamní agentury vykazují obrat do milionu korun. Některé z firem mají stále zaměstnance a některé si najímají brigádníky a osoby samostatně výdělečně činné (OSVČ) na různé práce související s výrobou, grafickými úpravami a dalšími pracemi spojenými s reklamou a reklamními nabídkami. Všem bylo položeno pět základních otázek (počet zaměstnanců celkem, výše ročního obratu, % realizovaných činností oproti roku 2019 v měsících únor až srpen 2020, zda klienti jejich reklamní agentur byli spíše: více malých firem, malý počet velkých firem anebo kombinace, kolik museli propustit zaměstnanců). Zajímavým psychologickým aspektem průzkumu bylo, že všechny oslovené firmy na telefonický dotaz spontánně odpověděly (byli osloveni majitelé firem nebo jejich zástupci).

Z tabulky č. 1 vyplývá skutečnost, že pro průzkum byla vybrána větší města ČR. Osm reklamních agentur hospodaří s ročním obratem větším než 1 milion Kč a tři agentury mají roční obrat pod 1 milion Kč. Dále z tabulky vyplývá, že firmy měly zákazníky typu více malých firem, více velkých firem a kombinace obou typů. V obrázku č. 1 bude vidět vliv výše uvedeného portfolia na změny, které nastaly na „jaře 2020“ z důvodu onemocnění Covid-19.

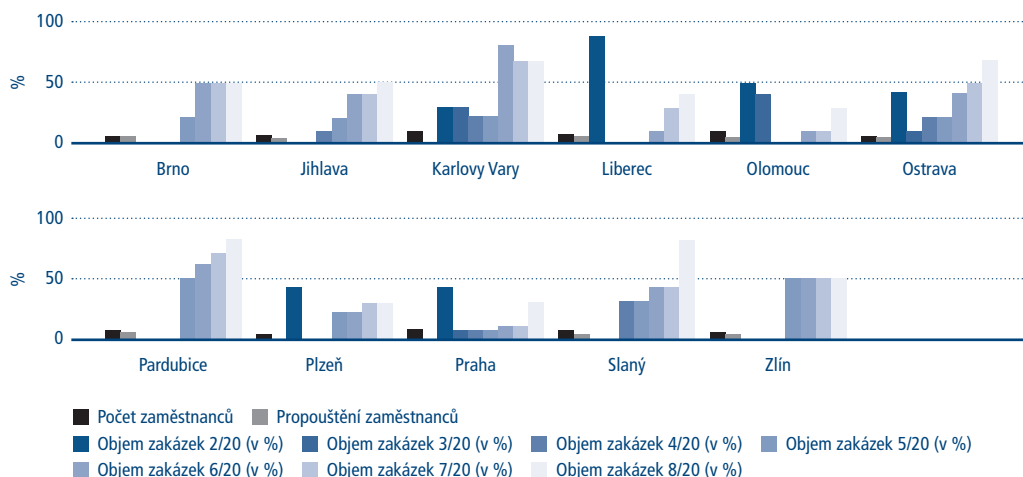
Z obrázku č. 1 je vidět, že objem zakázek reklamních agentur (RA) se snížil natolik, že ani v měsíci srpnu 2020 nedosahuje žádná z firem 100 % objemu zakázek v předešlém období. RA v měsíci lednu a únoru obecně mívají minimální

Tabulka č. 1 » Typy zákazníků reklamních agentur a roční obrát firem

Vybrané reklamní agentury	Roční obrát v Kč	Portfolio zákazníků
Brno	do 1 milionu	více malých firem
Jihlava	do 1 milionu	kombinace malých i velkých firem
Karlovy Vary	nad 1 milion	více malých firem
Liberec	nad 1 milion	malé množství velkých firem
Olomouc	nad 1 milion	kombinace malých i velkých firem
Ostrava	nad 1 milion	více malých firem
Pardubice	nad 1 milion	více malých firem
Plzeň	nad 1 milion	kombinace malých i velkých firem
Praha	do 1 milionu	malé množství velkých firem
Slaný	nad 1 milion	kombinace malých i velkých firem
Zlín	nad 1 milion	malé množství velkých firem

Pramen: vlastní zpracování tabulky č. 1 na základě telefonického průzkumu (8/2020)

Obrázek č. 1 » Dopad nepříznivého vlivu „jaro 2020“ na reklamní agentury v ČR — porovnání objemu zakázek v roce 2020 oproti předešlému roku



Pramen: vlastní zpracování na základě telefonického průzkumu (8/2020)

až nulový objem zakázek a jejich činnost se startuje až v měsíci březnu. V roce 2020 vzhledem k onemocnění Covid-19 je měsíc březen a duben téměř bez zakázek. Například v Liberci RA připravovala reklamu včetně potisků dresů a reklamních před-

mětů pro extraligové hokejové kluby každoročně, v roce 2020 „ze dne na den“ nula zakázek a až v srpnu jsou asi na 40 % objemu zakázek a v nejistotě, jak řekla majitelka RA. Zlínská RA převážně připravovala reklamy pro festivaly a volební bill-



boardy. Festivaly se nekonaly a volby již připravovat budou, takže jsou od měsíce května asi na 50 % zakázek předchozího roku. Některé RA dokonce musely propustit svoje zaměstnance, pouze tři RA nepropustily nikoho a jedna RA v Liberci situaci řešila odchodem zaměstnankyně na mateřskou dovolenou. RA z Karlových Varů se udržela z důvodu, že pracovala pro více malých firem, které také prosperovaly i v době „koronavirové“ a vzhledem k mimořádně silnému roku 2019 zůstaly na objemu zakázek 70–80 %, což považují za fakt, že se jich „jaro 2020“ dotklo minimálně. Z obrázku č. 1 také vyplývá, že RA, které měly svoje portfolio u více malých firem, tak se jim lépe podařilo překlenout utlumenou činnost reklamy v tomto období. Zatímco RA, které připravovaly reklamu pro malé množství velkých firem, tak zůstaly „ze dne na den“ na nule objemu zakázek jako RA z Liberce.

3.3 Změna chování zákazníků a vliv na životní prostředí

V dočasném stavu pandemie na planetě se zákazník nezaměřoval tolik na kvalitu a původ výroby, jak na uspokojení vlastní nezbytné potřeby (potraviny, dezinfekční prostředky, ochranné pomůcky, léky). Zákazník hledal výrobce kdekoli včetně globálního trhu. Environmentální zodpovědnost nebyla řešena. V době pandemického onemocnění Covid-19 došlo ke změně zákaznického i spotřebitelského chování. I přesto, že trh je nadvýrobu přesycen, tak „jaro 2020“ ukázalo, že nadprodukce většiny zboží a služeb ztratila zákazníky, ale na druhé straně po nově žádaných výrobcích byla vysoká poptávka. Co se týká ochrany přírody a chování zákazníků (spotřebitelů), ta v době „koronavirové“ na jedné straně utrpěla, a na straně druhé došlo i ke zlepšení životního prostředí. Díky omezení letecké dopravy i omezení ostatních transportů došlo k poklesu škodlivých emisí v ovzduší. Kvůli ochraně zákazníků před virem Covid-19 však došlo k vysoké spotřebě jednorázových plastových obalů, a to úplně ve všech obchodech a nákupních centrech.

V období „jaro 2020“, z důvodu vládních opatření a dodržování přísných pravidel hygieny pro minimalizaci přenosu viru Covid-19, obchodní řetězce používaly mnohonásobně větší množství právě igelitových sáčků a rukavic. Zároveň i zákazníci (spotřebitelé) měli mnohonásobně vyšší spotřebu neekologických obalů namísto svých vlastních látkových tašek a sáčků. Pro tento příspěvek byl proveden telefonický průzkum na centrále dvou vybraných německých obchodních řetězců v ČR Lidl a Penny Market, jejichž sortiment jsou potraviny, zboží denní potřeby včetně drogerie – sortiment, který v období „jaro 2020“ byl preferován zákazníky. Jedná se o kvalifikovaný odhad, který byl ověřen a potvrzen v místních prodejnách.

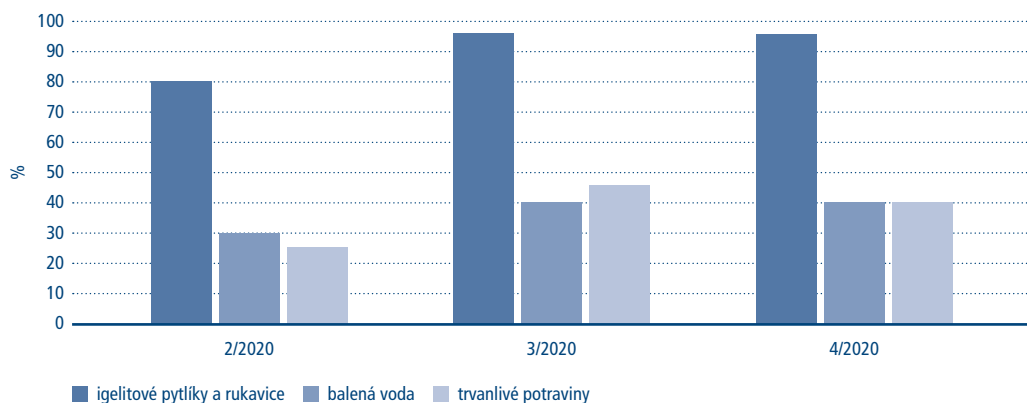
Společnost Lidl má na území ČR 261 prodejen. Filozofie prodeje společnosti Lidl je založena na privátních značkách, které tvoří více než 80 % veškerého sortimentu. Společnost Lidl se snaží být odpovědná vůči svému okolí. Zaměřuje se na podporu dětí nemocných i zdravých (Lidl, 2020). Diskontní řetězec Penny Market garantuje potravinářské výrobky regionální a české (7 z 10 výrobků). Penny Market má v ČR 387 poboček. Sortiment, který Penny Market prodává, je šetrný k životnímu prostředí. Vede svoje zákazníky ke snížení plýtvání potravinami, ke správnému uchovávání potravin a využívání opakovaných vlastních obalů namísto obalů igelitových jednorázových (Penny, 2020).

Z obrázku č. 2 je vidět, že ve sledovaném období „jaro 2020“ se mnohonásobně zvýšila spotřeba jednorázových igelitových sáčků a rukavic až na 95 % v měsíci březnu a dubnu 2020. Také spotřeba balené vody v plastových obalech byla zvýšena o 40 % v tomto období. Denní spotřeba na všech pobočkách Lidlu byla asi jeden milion kusů igelitových sáčků a igelitových rukavic denně (tato informace byla poskytnuta zástupcem z Lidlu). Vzhledem k tomu, že jeden igelitový sáček stojí 0,07 Kč (dle dodavatele), tudíž vznikly obchodnímu řetězci zvýšené náklady spojené s ochranou proti přenášení viru a starostí o bezpečnost zákazníků. Tím byla zvýšena zátěž na životní prostředí a likvidaci jednorázových igelitových obalů.

Z obrázku č. 3 je vidět, že spotřeba igelitových sáčků a igelitových rukavic byla v průměru ještě vyšší než u obchodních řetězců Lidl, dosahovala až 100 % navýšení v měsících březen a duben 2020. Balené vody bylo také nakupováno o 50 % navíc v měsíci únoru a březnu, k poklesu došlo až v mě-

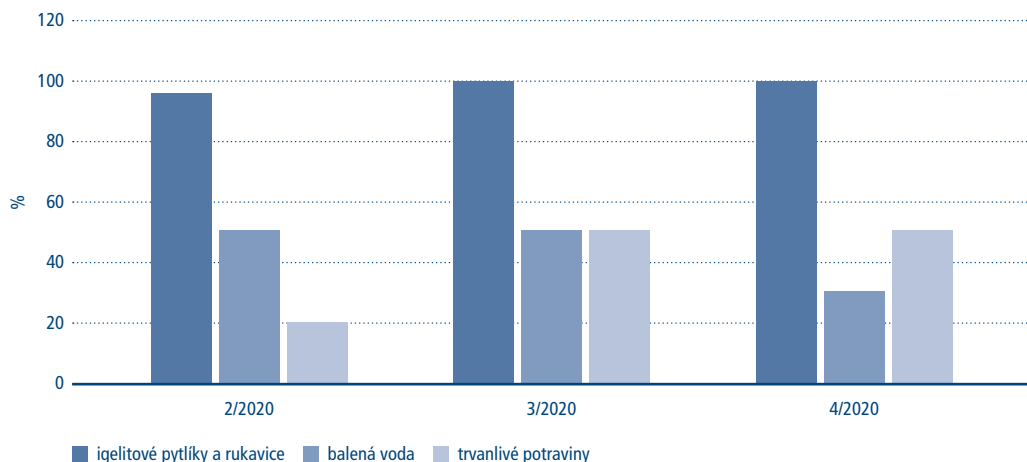
síci dubnu 2020. Trvanlivé potraviny zákazníci také nakupovali v Penny Marketu obdobně jako v Lidlu. Několikanásobně zvýšená spotřeba igelitu, plastových obalů a jejich likvidace vytváří škodlivé emise a ty poškozují životní prostředí.

Obrázek č. 2 » Zvýšená spotřeba igelitových a plastových obalů včetně nákupů trvanlivých potravin — Lidl ČR



Pramen: vlastní zpracování na základě telefonického průzkumu (8/2020)

Obrázek č. 3 » Zvýšená spotřeba igelitových a plastových obalů včetně nákupů trvanlivých potravin — Penny Market ČR



Pramen: vlastní zpracování na základě telefonického průzkumu (8/2020)



→ 4. Závěr

Chování zákazníka (spotřebitele) nelze odhadnout. Je to důvodu různých subjektivních preferencí zákazníka, doporučení od ostatních, naléhavosti potřeby, podle finančních možností zákazníka, emočního rozpoložení, věku kupujícího, a dalších různých subjektivních a objektivních vlivů okolí, které mají dopad na rozhodování a zákaznické chování. Na „jaře 2020“ jsme byli svědky zvláštního fenoménu, vyhlášení pandemie onemocnění Covid-19 a jediné, co ze subjektivních preferencí zákaznického chování zůstalo, byla naléhavost potřeby zabezpečit základní produkty pro nejbližší rodinu a dodržet zásady ochrany, které stanovila vláda v souvislosti s onemocněním Covid-19.

Jednalo se o základní nákupy potravin, dezinfekčních prostředků, látek a potřeb k šití roušek. Lidé museli přizpůsobit svoje chování i při běžných rutinních nákupech, a to omezit nákupy pouze na dobu nezbytně nutnou, a hlavně předvídat další svoje chování a kroky s ohledem na zaměstnání, výuku ve škole, s ohledem na nemocné a starší generace, protože se nevědělo, jak se situace bude vyvíjet v dalších měsících. Poptávka po reklamě a prezentacích klesla. Nebyl zájem. Nulový zájem byl i o reklamní předměty, upoutávky na sportovní akce, koncerty, billboardy. Při nákupech museli lidé používat roušky, igelitové rukavice, balené pečivo a dezinfekční prostředky. Tím došlo k velkému navýšení spotřeby igelitových a plastových obalů. „Koronavirová“ doba a nenadálá situace posunula myšlení lidí do nové úrovně. Do úrovně sounáležitosti, většinou nezištné pomoci, sdílení rad a nabídky spolupráce. Byly využívány informační technologie, které sloužily ke sdílení empatie a vzájemné pomoci s ostatními lidmi, kteří psychicky strádali. Zajímavostí je, že tuto situaci predikoval Horky před dvěma roky (Horky, 2018, s. 29).

V tomto příspěvku bylo zjištěno, že onemocnění Covid-19 rozsáhle ovlivňuje chování zákazníka a mění trh. Jsme svědky zpomalení ekonomiky, jsme svědky nebývalého fenoménu, poklesu ceny

ropy na ropných trzích k nule ke dni 20. 04. 2020. Vlastní průzkum byl zaměřen na tři kategorie – změna nákupního chování zákazníka, trh reklamy a reklamních agentur a vliv Covid-19 na ochranu životního prostředí. K nejrychleji rostoucím kategoriím zboží, které se prodávalo, byly dezinfekční a ochranné prostředky pro domácnost včetně základních trvanlivých potravin, a to i nákupy do zásoby pro domácnosti. Zastavila se letecká doprava, změnily se podmínky na trzích všech komodit. Zákazníci utráceli pouze za nejnnutnější potraviny a potřeby a vykazují sklon k úsporám. Z průzkumu vyplynulo, že se zastavilo podnikání v oblasti reklamy a reklamních agentur v měsíci únoru, březnu, dubnu 2020 a v měsíci srpnu 2020 RA mírně zvyšují objem zakázek.

Dále z obrázků č. 2 a 3 je vidět, že ve vybraných obchodních řetězcích se mnohonásobně zvýšila spotřeba igelitových pytlíků, igelitových rukavic (až o 100 %) a plastových obalů. Vysoká spotřeba má vliv na zvýšené náklady obchodních řetězců a následně na likvidaci těchto obalů zatěžujících přírodu. Vzhledem k tomu, že se pravděpodobně bude situace s Covidem-19 opakovat v podzimních měsících 2020, mělo by obyvatelstvo být na staronovou situaci připraveno. Podzimní situace roku 2020 může přinést nová vládní opatření, která budou muset lidi dodržovat a zároveň podporovat a ochraňovat psychické zdraví své i svého okolí, pomáhat dětem, rodičům, kolegům i sousedům. Zákaznické chování bylo zásadním způsobem změněno. Nákupní chování zákazníků v tomto období změnilo svoji podobu, zákazník nakupoval pouze to nejnnutnější v předem vymezené době, ve velké míře využíval jednorázových igelitových obalů a tím zvyšoval zátěž na životní prostředí. Další změnou zákaznického chování bylo omezení až zastavení podnikání ve všech oblastech, ale také v oblasti reklamy z důvodu nezájmu o reklamu a jakoukoliv propagaci, vzhledem k nařízením vlády pro ochranu obyvatel před onemocněním Covid-19 (zastavení všech veřejných i soukromých akcí, koncertů, prezentací, „zastavení ekonomiky“). Důvodem byly obavy a strach z onemocnění

Covid-19. V různých zemích světa se situace vyvíjela odlišně. Přínosem příspěvku je analýza a popis nebývalé situace „jaro 2020“, která nastala

z důvodu onemocnění Covid-19 a změnila chování zákazníka.

LITERATURA A PRAMENY

- [1] CLEGG, B.: *Vyjednávání – dohodněte se s ostatními*. Brno: CP Books, 2005.
- [2] FINEX: *Ropa (Brent + WTI) – Cena ropy a další informace*. Plzeň: Finex, 2020. [online]. [cit. 2020-07-15]. Dostupné z: <https://finex.cz/komodita/ropa/?gclid=EAIaIQobChMIwtNznKnR6QIVCYfVCh3hrgX XEAAAYAiAAEgLuIvD_BwE>.
- [3] HORREL, E.: *Zákaznická věrnost – jak zvýšit počet zákazníků a udržet si je*. Brno: Computer Press, 2007.
- [4] HORKY, V.: *Customer Service in the Transhuman Age*. Prague: Brand Embassy, 2018.
- [5] HOYER, W. D., MACINNIS, J. D., PIETERS, R.: *Customer Behavior*. Boston: Cengage Learning, 2018.
- [6] KAPUTA, C.: *Staňte se značkou*. Praha: Management Press, 2011.
- [7] KOTLER, P., TRIAS de BES, F.: *Inovativní marketing. Jak kreativním myšlením vítězit u zákazníků?* Praha: Grada Publishing, 2005.
- [8] LIDL: *Lidl: Správná volba*. Praha: Lidl, 2020. [online]. [cit. 2020-08-20]. Dostupné z: <www.lidl.cz>.
- [9] LINDSTROM, M.: *Vyluxované mozky. Triky, které používají firmy, aby nás přiměly k nákupu*. Praha: Management Press, 2012.
- [10] MZ ČR: *Aktuálně o koronaviru*. Praha: Ministerstvo zdravotnictví České republiky, 2020. [online]. [cit. 2020-07-15]. Dostupné z: <<https://koronavirus.mzcr.cz/>>.
- [11] NIELSEN: *Covid-19-meni-nakupni-chovani-ceskych-spotrebitelu*. Praha: Nielsen, 2020. [online]. [cit. 2020-07-15]. Dostupné z: <<https://www.nielsen.com/cz/cs/insights/article/2020/covid-19-meni-nakupni-chovani-ceskych-spotrebitelu/>>.
- [12] PENNY: *Penny: Nakupujte hezky česky*. Praha: Penny, 2020. Zdroj: [online]. [cit. 2020-08-20]. Dostupné z: <www.penny.cz>.
- [13] VYSEKALOVÁ, J. et al.: *Chování zákazníka*. Praha: Grada Publishing, 2011.
- [14] VYSEKALOVÁ, J. et al.: *Psychologie reklamy*. Praha: Grada Publishing, 2012.
- [15] VYBÍRAL, Z.: *Psychologie komunikace*. Praha: Portál, 2005.
- [16] WHO: *Rolling updates on coronavirus disease (COVID-19)*. Geneva: World Health Organization, 2020. [online]. [cit. 2020-07-15]. Available from: <<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>>.

Další zdroje informací:

- [17] Zákon č. 17/1992 Sb., o životním prostředí, ve znění pozdějších předpisů

ABSTRAKT

Tento příspěvek definuje změny v psychologii chování zákazníků (spotřebitelů), které nastaly vznikem mimořádné situace ovlivněné onemocněním Covid-19 v České republice i ve světě od jara 2020. Specifické postavení ve vztahu zákazník a výrobce má nabídka a poptávka po zboží a službách. V 21. století obecně nabídka převyšuje poptávku. Globální trh je zásobován neomezeným množstvím výrobků a služeb. Přesto na jaře 2020 došlo, díky nenadálé mimořádné situaci, k zajímavému jevu. Poptávka po určitých komoditách mnohonásobně převýšila nabídku. Ekonomika se zastavila, zákazníci měli sklon k úsporám a všeobecná poptávka se snížila, pouze poptávka po určitém typu zboží byla mnohonásobně zvýšena. Na druhé straně →

došlo k dalšímu zajímavého jevu na trhu ropy, a to k nejhoršímu dni na ropných trzích. Koncem dubna 2020 poklesla cena ropy na historické minimum. Cílem příspěvku je seznámit se změnou chování zákazníka (spotřebitele) v mimořádném období, které započalo koncem roku 2019 a překlenuje se do jara 2020. Cílem příspěvku je seznámit s nákupním chováním zákazníků v souvislosti se změnou, která nastala, v souvislosti s pozastavením práce reklamních agentur a ztráty významu reklamy. Změna se také promítla do ochrany životního prostředí. Vliv a dopad změny chování zákazníka je doprovázen grafy a tabulkami. Výzkumná otázka: Může mít onemocnění Covid-19 tak rozsáhlý vliv na změnu chování zákazníka?

KLÍČOVÁ SLOVA

Chování zákazníka; změna spotřebitelského chování; onemocnění Covid 19; trhy; reklama; životní prostředí

Change of Customer Behavior during the Time of “Coronavirus”

ABSTRACT

This article defines the changes in the psychology of customer (consumer) behaviour that have occurred due to exceptional situation affected by Covid 19 disease in the Czech Republic and in the world since spring 2020. A specific role in the customer-producer relationship is a supply and demand for goods and services. In the 21st century, supply generally exceeds demand. The global market is supplied with unlimited quantities of products and services. Yet in spring 2020, due to a sudden situation, there was an interesting phenomenon. Demand for certain commodities outstripped supply many times over. The economy stalled, customers tended to save and general demand has decreased, only demand for a certain type of goods has been multiplied. On the other hand there was another interesting phenomenon in the oil market, on the worst day in the oil markets. In the end of April 2020, the price of oil had fallen to historic minimum. The aim of this article is to familiarise the change of customer (consumer) behaviour in the extraordinary period that began in late 2019 and spanned to spring 2020. The aim of this article is to familiarise customers with purchasing behaviour in relation to the change that has occurred in relation to the suspension of advertising agencies and the loss of importance of advertising. The change has also reflected into environmental protection. The influence and impact of changing in customer behaviour is illustrated by graphs and tables. Research question is: Can Covid 19 disease have such a large effect on customer behavior change?

KEYWORDS

Customer behavior; change in consumer behavior; Covid 19 disease; markets; advertising; environment

JEL CLASSIFICATION

R29; Z10



Kompetencie komunálnej sféry v oblasti odpadového hospodárstva na Slovensku

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* 1. Úvod

Primárnou úlohou obce je starostlivosť o všestranný rozvoj svojho územia, ako aj o potreby svojich obyvateľov, ako to vyplýva z §1 ods. 2 zákona o obecnom zriadení. Medzi nosné úlohy samosprávy obce zákonodarca preto zaradil aj úlohy environmentálneho charakteru, pretože oblasť životného prostredia a jeho ochrany má závažný a kľúčový vplyv na rozvoj obce, ako aj život jej obyvateľov. Oblasť odpadového hospodárstva je jednou zo slabých stránok, ktorá ohrozuje trvalo udržateľný, ekologicky orientovaný rozvoj mesta.

V oblasti odpadového hospodárstva zákon ukladá obciam celý rad povinností vo vzťahu k organizovaniu nakladania s odpadom, pričom obec je zodpovedná za riadenie celého procesu nakladania s komunálnym odpadom a drobným stavebným odpadom, ktorý vzniká na jej území. V prvom rade je obec povinná zaviesť vhodný systém zberu odpadu, ktorý má zabezpečiť zber a prepravu komunálneho odpadu, a najmenej dvakrát do roka zabezpečiť zber a odvoz objemných odpadov, za účelom ich následného zhodnotenia alebo zneškodnenia. Akým spôsobom obec zabezpečí zber komunálneho odpadu, zákon ponecháva na rozhodnutí obce. Zároveň obce upravujú všeobecne záväzným nariadením podrobnosti, ktoré sa tý-

kajú nakladania s komunálnym odpadom a drobným stavebným odpadom (ďalej „KOaDSO“) a s elektroodpadmi z domácností. Náklady, ktoré súvisia s nakladaním s odpadmi obec hradí z obligatórneho miestneho poplatku podľa zákona č. 582/2004 Z.z., zároveň je potrebné dodať, že zákon o odpadoch obci nezakazuje použiť na danú činnosť aj iné prostriedky ako je uvedený miestny poplatok, čím však dochádza k ohrozeniu motivácie separovať odpady a znižovať jeho celkové vyprodukované množstvo (Cepek et al., 2017).

Preto je dôležité venovať sa aj oblasti zabezpečenia verejnoprospešných služieb, ktoré sa týkajú nakladania s komunálnym odpadom a drobným stavebným odpadom, ako aj hodnotenia finančnej stránky tejto problematiky. Ochrana životného prostredia, nakladanie s odpadom, ktorý denne produkujeme, jeho likvidácia a separácia sú problémom, ktorému sa v súčasnosti venuje zvýšená pozornosť.

2. Odpadové hospodárstvo na Slovensku

Odpadové hospodárstvo je na Slovensku riešené už od roku 1991, kedy došlo k schváleniu prvého zákona o odpadoch. O desať rokov neskôr v roku 2001 došlo k jeho nahradeniu, zákonom č. 223/2001 Z.z. o odpadoch, ktorý platil do roku 2015, →

→ kedy došlo k jeho výrazným zmenám. Od 1. 1. 2016 platí zákon č. 79/2015 Z.z. o odpadoch a o zmene a doplnení niektorých zákonov. Celé odpadové hospodárstvo na Slovensku okrem spomínaného zákona o odpadoch upravujú aj vykonávacie vyhlášky (celkovo ich je osem), čoho dôsledkom je vysoká regulácia a vysoká administratívna náročnosť tejto oblasti (Schabjuk, 2019).

Dôležitým medzníkom v riadení odpadového hospodárstva bol rok 2015, kedy došlo k schváleniu nového zákona č. 79/2015 Z.z. o odpadoch (s účinnosťou od 1. 1. 2016), ktorý mal v niektorých oblastiach výrazný vplyv na odpadové hospodárstvo samospráv a ktorý zrušil predchádzajúcu právnu úpravu (zákon č. 223/2001 Z.z.). Rovnako dôležitou legislatívnou zmenou v tejto oblasti bolo aj prijatie zákona č. 329/2018 Z.z. o poplatkoch za uloženie odpadu, ktorý od 1. 3. 2018 výrazne zvýšil a diferencuje poplatok pre miestne jednotky za uloženie zmesového komunálneho odpadu a objemného odpadu na skládku. Zmesový komunálny odpad sa tak stal značne drahším, čo samosprávy podnietilo k stimulácii ich aktivít smerom k znižovaniu jeho tvorby a podpore triedeného zberu, domáceho kompostovania apod. (TS Banská Štiavnica, 2019). Samotný zákon o odpadoch upravuje široký diapazón problémov a okruhov v oblasti odpadového hospodárstva, od programových dokumentov v odpadovom hospodárstve, cez práva a povinnosti fyzických a právnických osôb pri predchádzaní vzniku odpadov a pri nakladaní s odpadmi, až po činnosť Recyklačného fondu.

Na celoštátnej úrovni predstavuje Program odpadového hospodárstva SR najvýznamnejší strategický dokument tejto oblasti, ktorý je vydávaný na päťročné obdobie. Aktuálny dokument je na roky 2016–2020, a ktorý je vypracovaný v súlade s požiadavkami trvalo udržateľného rozvoja a obsahom zodpovedá požiadavkám, ktoré sú stanovené v právnych predpisoch SR a EÚ (najmä v zákone o odpadoch a smernice Európskeho parlamentu a Rady č. 200/898 ES z 19. 11. 2008 tzv. rámcovej smernice o odpade). Účelom smernice je priblíženie sa k „recyklujúcej spoločnosti“, ktorou snahou

je predchádzanie vzniku odpadu a jeho využívanie ako surovínového zdroja, efektívne odstránenie skládkovania odpadu, ktorý je možno recyklovať a kompostovať (MŽP SR, 2015).

Základným termínom skúmanej oblasti je pojem odpad, ktorý bol definovaný už aj v predchádzajúcej právnej úprave, a ktorý bol prevzatý z článku 3 bodu 1 rámcovej smernice o odpade. Predchádzajúca definícia bola doplnená o dodatok, že odpadom môže byť aj látka. Naďalej bol ponechaný objektívny a subjektívny aspekt tohto termínu. Ako vyplýva z predmetného zákona č. 79/2015 Z.z. z § 2 odseku 1 je dopad definovaný ako látka alebo huteľná vec, ktorej sa chce držiteľ zbaviť, alebo ktorej sa zbavuje alebo je povinný na základe osobitných právnych predpisov sa jej zbaviť, a práve v druhej časti uvedenej definície je viditeľný spomínaný objektívny a subjektívny aspekt. Jeden z najširších pojmov uvedeného zákona je aj definícia odpadového hospodárstva, v ktorom sú zahrnuté činnosti od obmedzovania či predchádzania vzniku odpadu, cez samotné znižovanie nebezpečnosti odpadov pre životné prostredie, až po samotnú činnosť nakladanie s odpadom (Đurđovićová et al., 2018).

Ďalším dôležitým termínom je nakladanie s odpadom, ktoré predstavuje jeho zber, prepravu, zneškodňovanie alebo zhodnocovanie, ako aj dohľad nad týmito činnosťami. Zberom odpadu je jeho zhromažďovanie od inej osoby, aj jeho predbežné triedenie a dočasné uloženie odpadu pre účely jeho ďalšej prepravy do zariadenia na spracovanie odpadov. Dôraz je v súčasnosti kladený na triedenie odpadov, čo predstavuje delenie odpadu podľa kategórií, druhov alebo iných kritérií, alebo oddeľovanie zložiek, ktoré možno po oddelení začleniť ako samostatné druhy odpadov (Zákon č. 79/2015 Z.z. o odpadoch a o zmene a doplnení niektorých zákonov).

Recyklácia (zhodnocovanie odpadu) je činnosť, ktorou sa odpad opakovane spracuje na materiál, látku alebo výrobok, ktorý je určený na pôvodný alebo iný účel, pričom recykláciou je aj opätovné spracovanie organického materiálu. Naopak, ener-

getické zhodnocovanie a opätovné spracovania na materiály, ktoré majú byť použité ako palivo alebo na aktivity spätného zasypávania, sa do recyklácie nezahŕňajú. Na druhej strane zneškodňovanie odpadu predstavuje činnosť, ktorá nie je zhodnocovaním, a to aj napriek tomu, že jeho sekundárnym výsledkom činnosti je spätné získanie energie alebo látok.

V realizovanom výskume je pozornosť venovaná dvom možnostiam zneškodňovania odpadu, a to možnosti zhodnocovania odpadu alebo jeho skládkovanie. Skládkovanie je trvalé uloženie odpadu na skládku odpadov, ktorá predstavuje miesto so zariadením, ktoré je určené na zneškodňovanie odpadov, kde sa odpady na trvalo ukládajú buď do zeme alebo na povrch zeme. Za skládku sa nepovažuje miesto so zariadením, resp. zariadenie, kde sú odkladané odpady dočasne, pred ich ďalšou prepravou na miesto, kde sa budú ďalej zhodnocovať, upravovať či zneškodňovať (Slovensko.sk, 2018).

V komunálnej sfére na Slovensku je dlhodobý negatívny trendom nakladanie s odpadmi a ich zneškodňovanie skládkovaním. V troch regiónoch (Žilinský, Nitriansky a Trnavský) presahuje úroveň skládkovania odpadov až 80 %. Avšak je potrebné zdôrazniť skutočnosť, že v posledných rokoch sa percentuálne zvýšilo materiálové zhodnocovanie

odpadov (R2-R11, recyklácia). Od roku 2004 je na Slovensku zavedená povinnosť zabezpečovať triedený zber komunálnych odpadov pre papier, plasty, kov, sklo a biologicky rozložiteľné komunálne odpady, okrem tých ktorých pôvodcom je prevádzkovateľ kuchyne. Aj napriek tomu, je možno triedený zber v slovenských mestách a obciach hodnotiť ako nedostatočný a viacero obcí túto povinnosť neplní v zmysle stanovenej zákonnej povinnosti (MŽP SR, 2015).

Pre potreby ďalšej analýzy je potrebné sa venovať aj vybranej položke miestnych rozpočtov-miestnym poplatkom za komunálny odpad a drobný stavebný odpad, ktorý pre obce a mestá predstavuje obligatórny poplatok v zmysle zákona č. 582/2004 Z.z. o miestnych daniach a poplatku za KOaDSO v znení neskorších predpisov. Tento poplatok slúži na úhradu výdavkov, ktoré sú spojené so zberom, prepravou, a službami spojenými s uložením odpadu na skládku, ktorý je na území mesta hradený organizáciami a občanmi podľa všeobecne záväzného nariadenia (ďalej len „VZN“) mesta o miestnych daniach a miestnom poplatku za KOaDSO. Sadzbu poplatku určuje každá miestna jednotka samostatne svojim VZN. Poplatníkom je (Zákon č. 582/2004 Z.z.):

- fyzická osoba, ktorá má v meste trvalý pobyt alebo prechodný pobyt alebo užíva nehnuteľ-

Tabuľka č. 1 » Spôsob nakladania s odpadmi a jeho číselné kódy pre potreby štatistiky

Spôsob nakladania s odpadmi	Kód nakladania
Zhodnocovanie materiálové	R2–R11
Zhodnocovanie energetické	R1
Zhodnocovanie iné	R12, R13
Zneškodňovanie spaľovaním	D10
Zneškodňovanie skládkovaním	D1
Zneškodňovanie iné	D2–D9, D11–D15
Iný spôsob nakladania	DO*, Z**
*DO – odovzdanie odpadu na využitie v domácnosti	
**Z – zhromažďovanie odpadov (dočasné uloženie pred ďalším nakladaním s nimi)	

Prameň: vlastné spracovanie podľa MŽP SR (2015)



→ Tabuľka č. 2 » Súhrnný zoznam aplikovaných benchmarkingových indikátorov

Ukazovateľ
Výdavky na odpadové hospodárstvo na obyvateľa
Výdavky na odpadové hospodárstvo k celkovým výdavkom mesta
Výdavky na nakladanie s odpadom na obyvateľa
Výdavky na nakladanie s odpadom k celkových výdavkom na OH
Výdavky na nakladanie s odpadom k celkovým výdavkom mesta
Výnosy z poplatku za KOaDSO na obyvateľa
Rozdiel výnosu z poplatku za KOaDSO a celkových výdavkov na OH
Objem separovaného odpadu na obyvateľa
Objem uloženého odpadu na skládku na obyvateľa

Prameň: vlastné spracovanie podľa Papcunová a Balažová (2006), Mihaliková et al. (2011)

- nosť na území mesta/obce na iný účel ako je podnikanie,
- právnická osoba, ktorá je oprávnená užívať alebo užíva nehnuteľnosť, ktorá sa nachádza na území mesta/obce na iný účel ako je podnikanie,
 - podnikateľ, ktorý je oprávnený užívať alebo užíva nehnuteľnosť na území mesta/obce za účelom podnikania.

3. Metódy výskumu a dáta

Pri spracovaní príspevku a za účelom dosiahnutia stanovených cieľov sme využili štandardné teoretické vedecké metódy skúmania, najmä metódu analýzy, syntézy, dedukcie, komparácie, konkrétnizácie a abstrakcie, ktoré sa využívajú na všetkých stupňoch riešenia vedeckého problému.

Východiskovým cieľom príspevku je na základe podrobného skúmania finančného hospodárenia vybranej vzorky slovenských miest zistiť, ako sú jednotky miestnej samosprávy schopné financovať vybrané kompetencie (konkrétne išlo o oblasť odpadového hospodárstva). Taktiež pre potreby výskumu bola definovaná aj výskumná hypotéza, že

s rastúcou veľkostnou kategóriou miest rastie aj množstvo vyprodukovaného odpadu v mestách, čo v konečnom v dôsledku vedie k vyšším výdavkom nielen na oblasť nakladania s odpadom, ale na celé odpadové hospodárstvo.

Jedným z parciálnych cieľov realizovaného výskumu je aj zistenie, ktoré okresné mesto dosahovalo v jednotlivých indikátoroch najlepšie výsledné hodnoty, a ktoré sa stalo „benchmarkom“ pre danú oblasť. Následne na základe podrobnej analýzy dostupných dokumentov zistiť príčiny tohto stavu a nájsť inšpiratívne prvky, ktoré by mohli aplikovať pri hospodárení aj ostatné mestá.

Pri získavaní údajov z oblasti odpadového hospodárstva, boli dáta primárne čerpané z hodnotiacich správ programových rozpočtov vybranej vzorky miest. V prípade, ak webové sídla miest nedisponovali uvedenými správami, sekundárnym zdrojom boli Programy odpadového hospodárstva za roky 2016–2020 okresných miest, avšak tu boli skutočné plnenia uvádzané len za roky 2014–2016 a nasledujúce roky predstavovali iba predikovaný vývoj. V prípade neexistencie ani jedného z vyššie uvedených zdrojov boli mailom kontaktovaní zamestnanci oddelení životného prostredia, resp. od-

padového hospodárstva mestských úradov vybraných okresných miest. Každé mesto pre potreby štatistiky každoročne vyplňa „*Hlásenie o vzniku odpadu a nakladaní s ním*“.

Korektné stanovenie a výber súboru ukazovateľov je východiskovým predpokladom merania a porovnávania výkonu verejných služieb. Pri voľbe indikátorov benchmarkingového charakteru je potrebné dodržiavať určité kritériá (ako napr. relevantnosť, porovnateľnosť, dostupnosť, kontrolovateľnosť, spoľahlivosť, zabezpečenie zberu dát a taktiež je potrebné brať do úvahy a zohľadniť aj náklady na zber údajov).

Podľa administratívno-správneho členenia je Slovenská republika rozdelená do 8 krajov a 79 okresov. Objektom skúmania sú všetky slovenské okresné mestá, avšak konečný počet v našom prípade je tvorený len 71 okresnými mestami. Na nižší počet vplyva predovšetkým skutočnosť, že dve najväčšie slovenské mestá Bratislava a Košice oficiálne pozostávajú z viacerých okresov (konkrétne Košice I–IV, Košice okolie a Bratislava I–V). Pre zabezpečenie vyššej prehľadnosti výsledkov boli uvedené okresy spojené do jedného.

Po skompletizovaní potrebných dát boli objekty skúmania rozčlenené do šiestich skupín podľa počtu obyvateľov (viď tabuľku 3) a následne boli kvantifikované výsledné hodnoty prepočítaných indikátorov. Vzhľadom na skutočnosť, že v každom sledovanom roku dosahovalo najvyššie hodnoty iné mesto, bolo potrebné výsledky pri kaž-

dom objekte za všetky roky spriemerovať a rozdeliť podľa stanovených veľkostných kategórií. Výkon jednotlivých pôsobností bol tak porovnávaný v reprezentatívnom súbore miest prostredníctvom týchto skupín.

4. Výsledky výskumu a ich interpretácia

Výsledkom realizovaného výskumu je zistenie, že priemerná hodnota reálne vynaložených výdavkov na jedného obyvateľa zaznamenala kolísavé tendencie vývoja. Do roku 2017 klesala hodnota výdavkov vo všetkých veľkostných kategóriách, a až v roku 2018 došlo k nárastu výslednej hodnoty skúmaného ukazovateľa. Vo veľkostnej kategórii miest K1 dokonca došlo v priemerných hodnotách k poklesu celkovej úrovne výdavkov na obyvateľa z hodnoty 46,99 eur v roku 2014 na hodnotu 37,23 eur, ale tendencia poklesu sa v roku 2018 zastavila. Prudký nárast výsledných priemerných hodnôt zaznamenala veľkostná kategória K5, kedy došlo k nárastu v roku 2018 oproti začiatku sledovaného obdobia o takmer 37 % (z hodnoty 45,06 eur na obyvateľa na hodnotu 61,55 eur). Najväčšia veľkostná kategória miest K6 dosahovala najvyššie priemerné hodnoty, a naopak kategória K1 najnižšie. Vyššie výdavky väčších miest súviseli tiež s vyšším počtom podnikateľských subjektov, ako ďalších producentov odpadu v mestách, s vyššími cenami za služby nakladania s odpadom (zber a zneškodňovanie odpadov), či s vyššou spotrebou

Tabuľka č. 3 » Členenie vybranej vzorky miest podľa veľkostnej kategórie

Veľkostná kategória miest	Počet obyvateľov	Počet skúmaných objektov
K1	0–9 999	10
K2	10 000–19 999	23
K3	20 000–29 999	17
K4	30 000–39 999	8
K5	40 000–49 999	3
K6	nad 50 000	10

Prameň: vlastné spracovanie



Tabuľka č. 4 » Priemerné výsledky veľkostných kategórií miest v indikátore — podiel výdavkov na odpadové hospodárstvo na obyvateľa (v %)

Veľkostné kategórie	2014	2015	2016	2017	2018	Priemer
K1	46,99	45,62	40,06	34,33	37,23	40,85
K2	44,16	72,88	38,31	39,43	48,39	48,63
K3	42,87	52,89	41,25	39,94	52,84	45,96
K4	43,05	45,47	39,18	37,03	43,27	41,60
K5	45,06	43,55	50,66	42,94	61,55	48,75
K6	50,86	49,70	47,74	46,77	53,16	49,65

Prameň: vlastné spracovanie

obyvateľstva podmienenou kúpyschopnosťou obyvateľov jednotlivých miest.

Najvyššie priemerné výsledky v danom ukazovateli počas sledovaného obdobia zo všetkých skúmaných objektov dosahovalo mesto Žiar nad Hronom, až niekoľkonásobne vyššie ako ostatné mestá. Na konečný výsledok mal značný vplyv predovšetkým rok 2015, kedy celkové výdavky na odpadové hospodárstvo tohto mesta dosahovali výšku až 11 207 306 eur (napr. oproti roku 2014 kedy výšku výdavkov evidovalo mesto na úrovni 1 595 519 eur, čo predstavuje až 7-násobné navýšenie za rok). Nárast bol spôsobený ukončením realizácie veľkého (viac ako 18 mil. eur) projektu „Centrum zhodnocovania odpadov Žiar nad Hronom“, ktorý pozostával zo štyroch samostatných a zároveň na seba nadväzujúcich technologických súborov, resp. prevádzkových zariadení:

- dotriedňovacie zariadenie,
- fermentácia a bioplynová stanica,
- gasifikácia (ide o technologické zariadenie, ktoré umožňuje súčasne výrobu elektrickej energie a tepla, odvádzaného vo forme tepla a/alebo teplej vody na sušenie vstupných bio-aktívnych odpadov),
- mechanická úprava nie nebezpečných odpadov.

Projekt je v rámci Slovenska jedinečný svojou komplexnosťou a bol realizovaný s finančnou podporou z EŠIF a v súčasnosti sa nachádza v päťroč-

nom monitorovacom období. Pozitívne je možné hodnotiť aj ďalšie významné projekty, ktoré mesto realizovalo v snahe zaviesť na svojom území inteligentné odpadové hospodárstvo spolu v súčinnosti so SmartCities klubom.

Podiel výdavkov na odpadové hospodárstvo k celkovým výdavkom mesta takmer totožne kopíroval predchádzajúci výsledok najmenej úspešných miest, okrem štvrtého a piateho miesta, kde sa umiestnilo mesto Gelnica a Topoľčany s hodnotou výsledného ukazovateľa na úrovni 9,4 %. Opäť najvyššie hodnoty za tento ukazovateľ vykazovalo mesto Žiar nad Hronom, ktoré na oblasť odpadového hospodárstva vynaložilo najväčší podiel výdavkov v porovnaní k celkovým výdavkom mesta (15,9 %). Ďalej nasledovalo mesto Ilava s hodnotou výsledného ukazovateľa na úrovni 13 % a mesto Brezno (10 %). Najnižší podiel výdavkov na odpadové hospodárstvo k celkovým výdavkom dosahovalo mesto Poltár 2,2 %, nasledovalo Sobrance s hodnotou výsledného ukazovateľa vo výške 2,5 %, Svidník (2,7 %), Rimavská Sobota (3 %) a Humenné (3,1 %).

Mestá náklady na činnosti, ktoré sú spojené s nakladaním s komunálnym odpadom a drobným stavebným odpadom hradia z obligatórneho miestneho poplatku podľa zákona č. 582/2004 Z.z. o miestnych daniach a miestnom poplatku za KOaDSO v znení neskorších predpisov. Spôsob, ako aj ďalšie záležitosti, ktoré sú spojené s vybera-

ním tohto poplatku mestá stanovujú VZN. Špeci-
fická situácia je pri hlavnom meste SR, kedy 10%
výnosu miestneho poplatku sa poskytuje do roz-
počtu mestských častí podľa počtu obyvateľov, čo
súvisí s § 31a zákona č. 377/1990 Zb. o hlavnom
meste SR Bratislave v znení neskorších predpisov,
ako aj Štatútu hlavného mesta SR Bratislavy.

Objem príjmov plynúci mestám z poplatku za
KOaDSO vo väčšine objektov výskumnej vzorky
nestačil kryť výdavky na odpadové hospodárstvo,

preto ho musia mestá kryť zo svojich ostatných
bežných príjmov rozpočtu. Pokles výnosov tohto
druhu príjmu zaznamenali viaceré mestá. Na plne-
nie príjmov z poplatku vplýva viacero faktorov,
ako napr. zrušenie existujúcich prevádzok u pod-
nikateľských subjektov, zníženie platobnej schop-
nosti poplatníkov, pokles množstva zmesového
odpadu z dôvodu zvýšenia podielu separovaného
odpadu, ktorý v sledovaných objektoch z roka na
rok rástol, znižovanie intervalov odvozov, či napr.

Tabuľka č. 5 » Poradie miest podľa dosiahnutých výsledkov v indikátore podiel výdavkov na odpadové hospodárstvo na obyvateľa (v eurách)

Mestá	2014	2015	2016	2017	2018	Priemer
Rimavská Sobota	18,50	12,02	15,51	23,19	24,31	18,71
Poltár	18,53	17,43	19,85	18,36	20,68	18,97
Humenné	23,85	21,59	21,37	20,18	19,43	21,28
Sobrance	21,37	20,83	27,67	21,29	21,94	22,62
Svidník	21,36	21,25	28,77	24,57	23,16	23,82
Mestá s najvyššími výsledkami						
Žiar nad Hronom	81,58	578,59	57,44	54,94	57,71	166,05
Ilava	95,00	102,68	102,46	56,49	60,23	83,37
Brezno	27,14	251,68	27,86	41,35	55,53	80,71
Banská Štiavnica	57,53	209,97	33,28	37,28	37,90	75,19
Galanta	57,35	134,76	48,18	58,35	66,97	73,12

Prameň: vlastné spracovanie

Tabuľka č. 6 » Priemerné výsledky veľkostných kategórií miest v indikátore výnos poplatku za KOaDSO na obyvateľa (v eurách)

Veľkostné kategórie	2014	2015	2016	2017	2018	Priemer
K1	22,18	22,68	25,16	25,26	24,76	24,01
K2	26,11	27,26	27,87	28,30	29,19	27,74
K3	31,32	30,96	31,73	32,14	31,92	31,61
K4	28,60	28,53	29,04	28,90	28,91	28,80
K5	29,92	29,76	30,41	30,50	33,63	30,85
K6	42,16	42,68	42,67	43,68	43,68	43,97

Prameň: vlastné spracovanie



→ zmenou typu nádob, výnimky z platenia z dôvodu dlhodobého pobytu občanov mesta mimo jeho územia, celkový pokles počtu obyvateľov, či zvýšenie priemerného veku poplatníkov. Rovnako tak viaceré objekty zaznamenali vysoké nedoplatky na tomto poplatku, ktoré boli vymáhané cestou súdneho exekútora.

Podiel výnosu z poplatku za KOaDSO na obyvateľa vykazoval najvyššie hodnoty v najväčších mestách výskumnej vzorky, čo potvrdzujú aj výsledky priemerných hodnôt veľkostných kategórií. Najvyššie hodnoty dosahovali mestá kategórie K6 s priemernou hodnotou ukazovateľa na úrovni 43,97 eur na obyvateľa a najnižšie výnosy z tohto poplatku na obyvateľa evidovali mestá kategórie K1 vo výške 24,01 eur na obyvateľa.

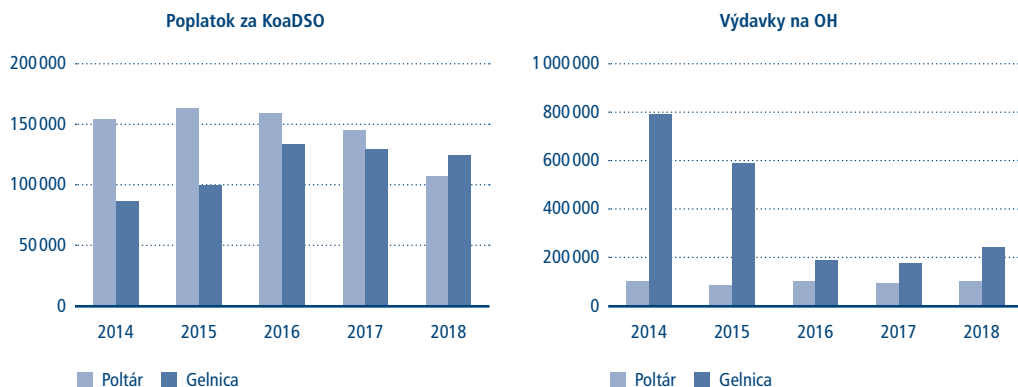
Z hľadiska výsledkov jednotlivých okresných miest, na prvom mieste s hodnotou výsledného ukazovateľa na úrovni 61,73 eur na obyvateľa sa umiestnilo najväčšie slovenské mesto Bratislava, po ňom nasledovalo druhé najväčšie mesto Košice (s hodnotou výsledku 58,36 eur na obyvateľa). V poradí tretím bol Trenčín (51,26 eur na obyv.), ďalej Piešťany (49,56 eur na obyv.) a Žilina (46,92 eur na obyv.). Na druhej strane najnižšie príjmy z uvedeného poplatku evidovalo mesto Medzilaborce (10,74 eur na obyv.), Stará Ľubovňa (12,72 eur

na obyv.), Tvrdošín (13,32 eur na obyv.), Sabinov (15,34 eur na obyv.) a Snina (17,15 eur na obyv.).

Komparáciou VZN dvoch podobne veľkostných miest, Piešťan a Sniny je zrejmé, že na konečný objem výnosu z poplatku majú veľký vplyv hlavne stanovené sadzby poplatku. V meste Piešťany s počtom obyvateľov 27 998 sa VZN č. 17/2019 stanovila sadzba pre poplatníka fyzickú osobu vo výške 0,095 eur za osobu a kalendárny deň a pre právnické osoby a podnikateľov na úrovni 0,0192 eur. V meste Snina je nastavená sadzba o čosi nižšie, a to pre FO vo výške 0,045 eur za osobu a kalendárny deň a pre PO a podnikateľov na úrovni 0,010 eur.

Pri obligatórnom poplatku je možné skúmať aj ďalší dôležitý ukazovateľ, ktorým je rozdiel výnosu z poplatku a celkových výdavkov, ktoré mestá vynakladajú na odpadové hospodárstvo. Z výsledkov je možné negatívne hodnotiť skutočnosť, že iba štyri mestá výskumnej vzorky evidovali celkové priemerné výsledné hodnoty v kladných číslach, čo znamená, že iba štyri mestá výskumnej vzorky pokryli výdavky na odpadové hospodárstvo výnosom z daného poplatku. Najvyššie kladné priemerné hodnoty dosahovalo mesto Košice (2 147 559 eur), Žilina (376 378 eur), Rimavská So-

Obrázok č. 1 » Výnos z poplatku za KOaDSO dvoch miest Poltára a Gelnice (v eurách)



Prameň: vlastné spracovanie

Tabuľka č. 7 » Priemerné výsledky veľkostných kategórií miest v indikátore rozdiel výnosu z poplatku a celkových výdavkov na odpadové hospodárstvo (v eurách)

Veľkostné kategórie	2014	2015	2016	2017	2018	Priemer
K1	-635 412	-149 076	-98 403	-61 248	-84 744	-205 776,6
K2	-241 034	-294 416	-153 377	-184 906	-25 6103	-225 967,2
K3	-412 349	-504 919	-267 801	-227 231	-610 637	-404 587,5
K4	-588 440	-738 448	-423 612	-402 407	-626 916	-555 964,5
K5	-750 923	-681 164	-953 640	-756 939	-1 506 353	-929 803,9
K6	-653 478	-483 141	-333 553	126 145	-449 952	-358 796,0

Prameň: vlastné spracovanie

bota (67 719 eur), Poltár (41 852 eur). V poradí piate najúspešnejšie mesto z pohľadu tohto indikátora bolo mesto Turčianske Teplice, ktoré však dosahovalo už záporné priemerné výsledky (-1 867 eur).

Nižšie uvedený obrázok porovnáva dve veľkostne podobné mestá Poltár a Gelnicu. Z obrázku je zrejmé, že mesto Gelnica vynakladala niekoľkonásobne vyššie výdavky na nakladanie s komunálnym odpadom. V roku 2014 v Gelnici najväčšiu finančnú položku predstavovali náklady na výstavbu čističky odpadových vôd v rámci schváleného projektu „ČOV a dostavba kanalizácie v meste Gelnica“, ktorého koniec implementácie bol v roku 2014 (607 490 eur). Na celkový výsledok mesta Gelnica tak do značnej miery vplývali vyššie výdavky na odpadového hospodárstvo, ako aj nižšie peňažné plnenie miestneho poplatku, čo je dôsledkom predovšetkým jeho nižšie stanovených ročných sadzieb v tomto meste.

Aj výsledky priemerných hodnôt veľkostných kategórií miest poukazujú na nepriaznivý vývoj v tomto ukazovateli, keď ani jedna veľkostná kategória nevykazovala kladné priemerné hodnoty. Najhoršie výsledky zaznamenala skupina miest K5 so zápornou hodnotou až na úrovni 929 804 eur, naopak relatívne najlepšie sa darilo najmenej veľkostnej skupine K1, ktorá však taktiež evidovala v tomto ukazovateli záporné výsledky vo výške -205 777 eur.

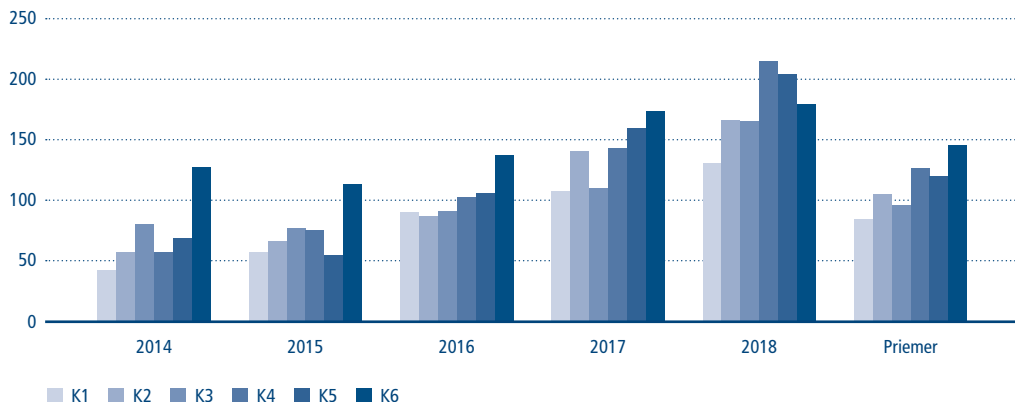
V SR bola povinnosť zaviesť triedený zber ko-

munálnych odpadov od roku 2004 a povinnosť obcí zaviesť na svojom území triedený zber pre biologicky rozložiteľný odpad bola zrušená a neskôr znova prijatá, čo pre komunálnu sféru prinieslo veľkú neistotu a malo čiastočne negatívny vplyv na celkové smerovanie odpadového hospodárstva. V súčasnosti majú obce povinnosť zabezpečovať triedený zber komunálnych odpadov (papier, plasty, kovy, sklo a BRO okrem tých, ktorých pôvodcom je prevádzkovateľ kuchyne). Vysoká miera recyklácie odpadu vyžaduje implementáciu efektívnych systémov triedeného zberu, ktorá závisí od stupňa urbanizácie, od miestnych podmienok, hustoty obyvateľstva a zloženia komunálneho odpadu (MŽP SR, 2015).

V našich podmienkach sa dlhodobo kladie dôraz na plnenie cieľov v oblasti zhodnocovania a recyklácie odpadov, a rovnako tak problémom je aj nelegálne nakladanie s odpadom, predovšetkým veľký počet nelegálnych skládok. Ako bolo vyššie uvedené, dlhodobo negatívnym javom v nakladaní s odpadmi je ich zneškodňovanie skládkovaním (D1). Za rok 2014 to bolo takmer 75 %, avšak tento vysoký podiel je potrebné zásadnými opatreniami zmeniť v prospech materiálového zhodnocovania (recyklácie) a opätovného použitia odpadov, čím dôjde k poklesu množstva skládkovaného odpadu a k šetreniu životného prostredia. Tento jav sa v nami realizovanom výskume potvrdil, a vo všetkých objektoch výskumnej vzorky došlo k rastu



➔ **Obrázok č. 2 » Priemerné množstvo zhodnoteného odpadu na obyvateľa v členení podľa veľkostných kategórií vybranej vzorky miest (v kg)**



Prameň: vlastné spracovanie

množstva separovaného odpadu a k poklesu úrovne skládkovaného odpadu.

Pri analýze výsledkov sme do úvahy brali nielen množstvo separovaného odpadu, ale celkovo odpad, ktorý je zneškodnený iným spôsobom ako skládkovaním, a tak v tomto prípade hovoríme o množstve zhodnoteného odpadu na obyvateľa. Predmetom skúmania pri tomto ukazovateli bolo celkovo 69 miest, a to kvôli vylúčeniu miest Sobrance a Detva, ktoré požadované dáta na základe žiadosti o sprístupnenie informácií podľa zákona č. 211/2000 Z.z. neposkytli. Za najúspešnejšie považujeme mesto, ktoré vykazovalo v rámci tohto indikátora najvyššie hodnoty. Najväčší objem zhodnoteného odpadu na obyvateľa vykazovalo mesto Bratislava, s priemernou hodnotou na úrovni 443,8 kg, nasledovali mestá Svidník (412,5 kg), Snina s priemerným výsledkom na úrovni 296,0 kg, Prievidza (248,3 kg), Turčianske Teplice (247,6 kg) a Pezinok (235,9 kg). Na druhej strane najnižší objem zhodnoteného odpadu na obyvateľa dosahovalo mesto Trebišov (8,3 kg na obyv.), ďalej Zlaté Moravce s priemerným výsledkom na obyvateľa vo výške 15,1 kg, Brezno (16,9 kg), Topoľčany (25,7 kg) a Kežmarok (26,9 kg).

Z priemerných výsledkov veľkostných kategórií miest možno konštatovať, že sa potvrdili vyššie uvedené predpoklady, že s rastúcou veľkosťou mesta dochádza aj k nárastu podielu separovaného, resp. inak zhodnoteného odpadu ako v prípade menších veľkostných skupín, čo súvisí aj s celkovo menším objemom vyprodukovaného odpadu v menších mestách. Kategória miest K6 bola v tomto ukazovateli najúspešnejšia a dosahovala najvyššie množstvo zhodnoteného odpadu na obyvateľa vo výške 152,3 kg. Na druhej strane najmenšia veľkostná skupina vykazovala aj najmenší objem zhodnoteného odpadu na obyvateľa na úrovni 91,0 kg. Avšak, celkovo je možné nielen v tejto veľkostnej skupine, ale aj v ostatných kategóriách pozitívne hodnotiť prudký nárast priemerných hodnôt počas celého sledovaného obdobia. Napr. v kategórii miest K5 vzrástol priemerný objem zhodnoteného odpadu na obyvateľa z hodnoty 74,6 kg v roku 2014 na úroveň 210,6 kg v roku 2018.

V indikátore množstvo uloženého odpadu na obyvateľa, v súlade s vyššie uvedeným, budeme za úspešné považovať mesto, ktoré dosahuje najnižšie výsledné priemerné hodnoty, keďže cieľom miestnych jednotiek by mal byť prechod k tzv. se-

parujúcej spoločnosti a zvyšovanie úrovne nielen separovaného, ale celkovo zhodnoteného odpadu. Nulové hodnoty v tomto indikátore dosahovali mestá Detva za rok 2017, z dôvodu, že sa na webovom portáli mesta nenachádzala Hodnotiaca správa za tento rok a Technické služby mesta Detva odmietli poskytnúť číselné údaje týkajúce sa odpadového hospodárstva a mesto Stará Ľubovňa, ktoré nemalo spracovaný ročný výkaz komunálneho odpadu za rok 2014 v elektronickej forme.

Z hľadiska veľkostných kategórií a výsledkov za ukazovateľ podiel množstva uloženého odpadu na skládku na obyvateľa, najnižšie a najpriaznivejšie hodnoty vykazovala najmenšia veľkostná kategória K1 (306,7 kg uloženého odpadu na obyvateľa). Najviac uloženého odpadu na skládkach evidovali mestá skupiny K3 (priemerne na úrovni 364,5 kg).

Najnižšie a najpriaznivejšie hodnoty uloženého odpadu na obyvateľa dosahovalo mesto Košice, len na úrovni 0,1 kg, nasledovalo mesto Bratislava s výslednou priemernou hodnotou vo výške 57,5 kg na obyvateľa, ďalšími mestami sú Dolný Kubín s hodnotou 88,6 kg, Sobrance (169,9 kg), Detva a Stará Ľubovňa s rovnakým výsledkom vo výške 196,6 kg. Najviac zneškodňuje odpad skládkovaním mesto Dunajská Streda (593,6 kg), Senica (544,8 kg), Zlaté Moravce (508,0 kg), Turčianske Teplice (498,4 kg) a Trenčín (496,4 kg).

Veľmi nízka výsledná hodnota Košíc je spôsobená skutočnosťou, že mesto zmesový komunálny

odpadu neukladá na skládku, ale celý objem energeticky zhodnocuje. Mesto v súlade s predchádzajúcou právnou úpravou – zákonom o odpadoch č. 223/2001 Z.z. a dnes platného zákona o odpadoch (§81 odsek 13) má uzatvorenú zmluvu na vykonávanie zberu, prepravy, zneškodňovania alebo zhodnocovania KOaDSO so spoločnosťou KOSIT, a.s. V zariadení Spaľovňa odpadov – TERMOVALORIZÁTOR sa s komunálnym odpadom nakladá činnosťami R1, R12, R13, D10, D13 a D15. Mesto prostredníctvom spoločnosti KOSIT a.s. prevádzkuje päť Zberných dvoroch a prostredníctvom mestského podniku – Správa mestskej zelene v Košiciach, prevádzkuje od roku 2011 zariadenia na zhodnocovanie odpadov činnosťami R3, R12 a R13 – Záhrada Bernátovce – stredisko výroby kompostu „mestská kompostáreň“ (Mesto Košice, 2018).

Dôležitou a najväčšou súčasťou výdavkov programu odpadového hospodárstva miest sú výdavky spojené s činnosťou nakladania s odpadom, čo predstavuje výdavky na zvoz, odvoz a likvidáciu odpadu od obyvateľov, ako aj právnických osôb (zneškodňovanie alebo zhodnocovanie odpadu). V nadväznosti na tieto skutočnosti, boli definované dva ukazovatele: podiel výdavkov na nakladanie s odpadom na obyvateľa (v eurách) a podiel výdavkov na nakladanie s odpadom k celkovým výdavkom na odpadové hospodárstvo (vyjadrený v percentách).

Vyššie uvedenými ukazovateľmi chceme posú-

Tabuľka č. 8 » Priemerné výsledky veľkostných kategórií miest v indikátore objem uloženého odpadu na skládku na obyvateľa (v kg)

Veľkostné kategórie	2014	2015	2016	2017	2018	Priemer
K1	296,33	314,26	308,53	301,37	313,02	306,71
K2	294,79	309,67	321,23	306,14	339,48	314,27
K3	360,66	356,78	374,21	356,09	374,74	363,75
K4	345,86	334,47	340,91	339,06	327,80	337,61
K5	314,65	339,54	343,88	346,06	369,93	342,80
K6	332,62	325,50	339,13	341,97	339,05	340,87

Prameň: vlastné spracovanie



→ **Tabuľka č. 9 » Priemerné výsledky veľkostných kategórií miest v indikátore podiel výdavkov na nakladanie s odpadom na obyvateľa**

Veľkostné kategórie	2014	2015	2016	2017	2018	Priemer
K1	37,20	34,14	28,66	27,83	31,85	31,93
K2	33,68	32,83	33,57	34,75	35,94	33,95
K3	37,81	36,22	35,51	35,24	41,04	37,16
K4	35,37	33,81	32,67	32,52	35,38	32,37
K5	44,99	43,55	50,52	41,98	61,18	48,44
K6	44,68	43,53	37,08	41,23	45,44	42,39

Prameň: vlastné spracovanie

diť výšku výdavkov, ktoré mestá uhrádzajú len na činnosti spojené s nakladaním s odpadom. Zvyšnú časť prostriedkov mestá vynakladajú na podprogram odstraňovanie nelegálnych skládok, propagácia a osvetová činnosť a v niektorých mestách súčasťou programu odpadové hospodárstvo sú aj činnosti, ktoré sú spojené s nakladaním s odpadovými vodami (kanalizácie, čističky odpadových vôd). Stále predpokladáme, že najnižšie výsledné priemerné hodnoty budú aj v týchto prípadoch najlepšie.

Najvyššie hodnoty ukazovateľa podiel výdavkov na nakladanie s odpadom na obyvateľa dosahovalo mesto Topoľčany na úrovni 65,04 eur na obyvateľa. V roku 2018 evidovali výdavky na tejto položke na úrovni 104,16 eur na obyvateľa (čo predstavuje dvojnásobný nárast oproti roku 2014). Dôvodom jeho umiestnenia na poslednom mieste je predovšetkým skutočnosť, že mesto v tomto podprograme zahŕňala aj finančné prostriedky, ktoré boli určené nie len na odvoz a uloženie, ale aj výdavky týkajúce dodávky a montáže polopodzemných kontajnerov na odpad, ako aj výdavky na rozšírenie kompostárne (stavebné práce na realizáciu stavby „Rozšírenie a intenzifikáciu prevádzky kompostárne bioodpadov mesta Topoľčany“) (Záverečný účet mesta Topoľčany za rok 2018).

Vysokú priemernú výslednú hodnotu evidovalo aj mesto Gelnica, ktorého výška bola na úrovni 64,04 eur na obyvateľa. V tomto meste boli najvyš-

šie výdavky evidované na začiatku sledovaného obdobia na úrovni 132,33 eur na obyvateľa a v roku 2017 bol zaznamenaný výrazný prepád výdavkov na tento podprogram v hodnote 27,72 eur na obyvateľa. Mesto Gelnica má v podprograme 6.1. Zber, odvoz a likvidácia odpadu za rok 2014 evidovanú sumu vo výške až 815 538 eur, pričom najvyššiu časť týchto výdavkov predstavovali náklady na výstavbu čističky odpadových vôd v rámci schváleného projektu „ČOV a dostavba kanalizácie v meste Gelnica“ vo výške 606 190 eur. Práve kvôli týmto dôvodom považujeme výsledné hodnoty v rámci tohto mesta za značne skreslené, keďže viaceré objekty výskumnej vzorky takto nepresne kategorizovali výdavky v tomto podprograme. Myslíme si, že pre celkovú prehľadnosť, ale aj správnosť evidencie, by mali mestá uvádzať nakladanie s odpadovými vodami, kde zaraďujeme aj výdavky na ČOV do samostatného podprogramu, resp. programu v rámci ich programových rozpočtov. Tretím mestom v poradí bolo mesto Považská Bystrica, s priemernou hodnotou na úrovni 60,84 eur na obyvateľa, po ktorom nasledovalo hlavné mesto SR Bratislava s výškou výsledku 58,90 eur na obyv. Najnižšie výsledky dosahovalo mesto Rimavská Sobota, ktoré evidovali priemerné výdavky na úrovni len 14,88 eur na obyvateľa, a v roku 2014 len vo výške 7,09 eur.

Najviac finančných prostriedkov na podprogram nakladania s odpadmi evidovali pred-

všetkým mestá najväčších veľkostných skupín K5 a K6, kde vzhľadom aj na vyššiu produkciu odpadu je potrebné zabezpečiť v prípade napr. vývozu odpadu viac zamestnancov, viac motorových vozidiel, ako aj viac správnych zamestnancov (prevádzka, riadenie, ekonomika). Najmenšie priemerné hodnoty vykazovali mestá najmenej kategórie K1 s výsledkom 31,93 eur na obyvateľa.

4. Záver

Vzhľadom na rastúci význam ochrany životného prostredia a propagácie ekologicky orientovaného miestneho rozvoja, sme si zvolili na bližšiu analýzu oblasť odpadového hospodárstva, ktorú je možné považovať v našich podmienkach ešte stále za jednu zo slabých stránok komunálnej úrovne. Prevedenou analýzou sa potvrdil vzťah medzi veľkosťou vybranej vzorky miest a objemom výdavkov na odpadové hospodárstvo. Vyššie výdavky vo väčších mestách súvisia predovšetkým s väčším objemom vyprodukovaného odpadu, jeho frekventovanejším odvozom, väčšie mestá disponujú aj viacerými

motorovými vozidlami, viacerými zamestnancami, na ich území sa nachádza aj vyšší počet podnikateľských subjektov.

Vzťah veľkostnej kategórie miest a objemu výdavkov na odpadové hospodárstva sa do značnej miery vyššie vykonanou analýzou potvrdil. Výskumom sme zistili viaceré pozitívne a negatívne stránky týkajúce sa oblasti odpadového hospodárstva v komunálnej sfére. Pozitívne je možno hodnotiť zvyšujúci sa podiel separovaného odpadu počas nami sledovaného obdobia a značný pokles množstva odpadu, ktoré mestá ukladajú na skládku. Na druhej strane ako najväčšie negatívum hodnotíme klesajúcu výšku výnosov miestneho poplatku za KOaDSO vo viacerých objektoch výskumnej vzorky. Iba štyri okresné mestá kryli výdavky na odpadové hospodárstvo výnosom z tohto miestneho poplatku. Tento nepriaznivý výsledok je spôsobený nižším finančným plnením tejto položky príjmov, či už v dôsledku vyššieho počtu neplatičov alebo nízkeho stanovenia sadzieb obligatorného poplatku.

Primárnou úlohou obce je starostlivosť o všestranný rozvoj svojho územia, ako aj o potreby svojich obyvateľov, ako to vyplýva z §1 ods. 2 zákona o obecnom zriadení. Medzi nosné úlohy samosprávy obce zákonodarcia preto zaradil aj úlohy environmentálneho charakteru, pretože oblasť životného prostredia a jeho ochrany má závažný a kľúčový vplyv na rozvoj obce, ako aj život jej obyvateľov. Oblasť odpadového hospodárstva je jednou zo slabých stránok, ktorá ohrozuje trvalo udržateľný, ekologicky orientovaný rozvoj mesta.

LITERATÚRA A PRAMENE

- [1] CEPEK, B.: *Správne právo hmotné: osobitná časť*. Bratislava: Wolters Kluwer, 2017.
- [2] ĎURDOVIČOVÁ, J. et al.: *Zákon o odpadoch: komentár a Katalóg odpadov*. Bratislava: Eurokódex, 2018.
- [3] MESTO KOŠICE: *Program odpadového hospodárstva mesta Košice na roky 2016–2020*. Košice: Mesto Košice, 2018.
- [4] MIHALÍKOVÁ, E.: *Finančná situácia a výkonnosť v samospráve*. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, Fakulta verejnej správy, 2011.
- [5] MŽP SR: *Program odpadového hospodárstva SR na roky 2016–2020*. Bratislava: Ministerstvo životného prostredia Slovenskej Republiky, 2015. [online]. [cit. 2020-01-09]. Dostupné z: <<https://www.>



- minzp.sk/files/sekcia-enviromentalneho-hodnotenia-riadenia/odpady-a-obaly/registre-a-zoznamy/poh-sr-2016-2020_vestnik.pdf>.
- [6] PAPCUNOVÁ, V., BALAŽOVÁ, E.: *Majetok obcí*. Nitra: Slovenská akadémia pôdohospodárskych vied, 2006.
- [7] SCHABJUK, T.: *Zákon o odpadoch a odpadové hospodárstvo*, 2019. [online]. [cit. 29. januára 2020]. Dostupné z: <<https://www.odpadovyhospodar.sk/zakon-o-odpadoch-a-odpadove-hospodarstvo/>>.
- [8] SLOVENSKO.SK: *Nakladanie s odpadmi*. Trnava: Národná agentúra pre sieťové a elektronické služby, 2018. [online]. [cit. 2019-11-12]. Dostupné z: <https://www.slovensko.sk/sk/agendy/agenda/_nakladanie-s-odpadmi/>.
- [9] TS BANSKÁ ŠTIAVNICA: *Program odpadového hospodárstva mesta Banská Štiavnica na roky 2016–2020*. Banská Štiavnica: Technické služby mestský podnik Banská Štiavnica, 2019.

Ďalšie pramene:

- [10] DESKTOPOVÝ GIS. *GIS začína zde*. [online]. [cit. 2020-03-02]. Dostupné z: <<https://www.arcdata.cz/produkty/arcgis/desktopovy-gis/arcmap>>.
- [11] Záverečné účty okresných miest Slovenskej republiky za roky 2014–2018.

ABSTRAKT

Na komunálnej úrovni na Slovensku existuje celý rad problémov, ktoré je potrebné riešiť. Často diskutovanou, či problematickou oblasťou je aj dlhodobý negatívny trend nakladania s odpadmi a ich zneškodňovanie skládkovaním. Miestne jednotky sú povinné zabezpečovať občanom zber a odvoz odpadov vyprodukovaných na ich území. Kľúčový je predovšetkým prístup obce, resp. mesta k tejto problematike, ako aj správna motivácia občanov. Cieľom príspevku je prostredníctvom kvantifikácie vybraných benchmarkingových indikátorov zhodnotiť úroveň hospodárenia a efektívnosť vykonávania kompetencie v oblasti odpadového hospodárstva všetkých slovenských okresných miest. Pozornosť je venovaná aj spôsobom, akým vybrané objekty skúmania, odpad vytvorený na ich území zneškodňujú.

KLÚČOVÉ SLOVÁ

Odpadové hospodárstvo; okresné mestá; benchmarkingové indikátory

Competences of the Municipal Sphere in the Field of Waste Management in Slovakia

ABSTRACT

At the municipal level in Slovakia, there are a number of problems that need to be addressed. The long-term negative trend of waste management and landfill disposal is also a frequently discussed or problematic area. Local units are obliged to ensure the collection and removal of waste produced on their territory by citizens. The key is especially the approach of the municipality, resp. cities on this issue, as well as the right motivation of citizens. The aim of the paper is to evaluate the level of management and efficiency of competence in the field of waste management of all Slovak district cities through the quantification of selected benchmarking indicators. Attention is also paid to the way in which selected research objects dispose of waste generated on their territory.

KEYWORDS

Waste management; district cities; benchmarking indicators

JEL CLASSIFICATION

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The Tablet-Like Childhood — a Chance or a Threat?

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* 1. Introduction

The turn of the 20th and 21st centuries brought about a global civilization and technical development recorded on an unexpected scale. It caused significant changes in many areas of human functioning and revolutionized his life. And although every civilization progress should be considered important and necessary for society, the transformations that he introduced into the lives of individuals brought not only positive effects. The pace of technological progress and social change is so fast that many people, regardless of their age, have problems with adapting and cannot keep up with the changing world (Górski, 2002).

Among this group, the greatest consequences of civilization transformations are borne by children, who are forced by the world to develop faster than their biological clock predicts. As Palmer (2006, p. 8) notes: *In our global culture where citizens are healthier, wealthier and more privileged than ever in history, children are becoming more and more unhappy every year. From moody and dissatisfied, to depressive and dysfunctional.*

The pace of life to which today's world is subject, forces a different model of social functioning of the family. Its main features are the decreasing amount of time devoted to the child, mainly consumer culture, passive rest model, faster, some-

how forced maturation of children and unlimited access to all multimedia techniques, which more and more often replace direct interpersonal communication.

The dominant and, at the same time, negative feature of the present day is the chronic shortage of time, which already affects the increasingly younger society. This lack of time has become an icon of our present day, although, according to the author, it is independent of the degree of ownership. Both the person who works does not have time, because he has to earn money for the family, and the unemployed person, because he is busy looking for a job (Nalaskowski, 2017, p. 28). This lack of time, so necessary for the child's development in accordance with the nature, causes behavioral disorders, learning difficulties, depression and isolation from the peer environment. Therefore, in relation to today's children, the name of a new disease entity related to mental health, referred to as emotional anemia, has appeared (Koźmińska and Olszewska, 2010, p. 12).

Lack of time generates another problem in upbringing, which is the loneliness of modern children, which is understood as an *objective state, meaning the lack of contacts with family and other people* (Szatur-Jaworska, Błędowski and Dziegielewska, 2006, p. 60), although it would seem that this the state does not apply to children living in

families. After all, *the family is a spiritual unity of a small group of people gathered in a common hearth by acts of mutual help and care* (Adamski, 2002, p. 31).

According to the above sociological definition, which focuses on the nature of ties in the family, this group forms a community. In it, you experience problems together, shape your personality, consolidate a specific system of values and attitudes, and develop your emotional and social system. And yet more and more often the problem of loneliness concerns not only children from pathological families. Children have no one to talk to about their affairs, have no support in difficult situations, because their parents are busy with their own problems.

The child, as the weakest social link, is mentally immature to be able to cope with the mounting difficulties. Physical development does not go hand in hand with emotional, social and cognitive development. Such maturation takes time, and any attempt to accelerate it results in anti-social behavior and mental health problems. It happens more and more often that a child, having no support in the family, looks for substitutes that seem to seem to be help and a way out of the situation. Sometimes they are drugs, sometimes the media, especially the Internet, which is a substitute for social life, and finally, it can be participation in criminal groups or subcultures where you are noticed and accepted. They build up the pedagogical space abandoned by adults, serving as *pedagogical self-service* (Kwiatkowska, 2005, p. 123). Reflection on the contemporary model of upbringing prompted me to examine how Polish children function in their free time, what they do, what their preferences and interests are.

2. Methodological assumptions of own research

One of the most important research problems was determining the forms of spending free time by students and determining which of them is a prior-

ity in the life of a young person. I also wanted to investigate how parents participate in spending free time with their children and what forms they prefer.

The research was conducted over several school years and was finally completed in 2016, and five schools in the Toruń powiat (county) were included in them (two of them connect a primary school with a middle school). A total of 521 students took part in them, which is a representative sample of all students of the studied schools. Due to the comparative approach to the issue, two levels of education were examined — primary schools with a group of 229 respondents (grades IV–VI) and lower secondary schools with a group of 292 people. The research method was a diagnostic survey with a survey technique. The research tool was a uniform questionnaire for both levels of education.

3. Analysis of own research results

In order to examine the interests of students, they were first asked about their preferred forms of spending their free time. The question in the questionnaire took an open form, which was to enable the respondents to express themselves freely.

Let us dwell for a moment on the most important result of the above study. As you can see, the media is at the forefront of spending free time, taking 1st, 2nd and 3rd place in the rank of junior high school students and 1st, 2nd and 4th place in the election of primary school children. It is a natural phenomenon because today, in the age of a constant increase in new knowledge and its equally rapid obsolescence, contact with the media is inevitable, which causes the progressive mediatization of everyday life. The media create the environment for the functioning of modern man. They cannot be denied an important role in the cognitive process, because they are an irreplaceable source of knowledge and information, especially in cases where it is impossible to experience something in person. However, their importance in relation to education as a whole should not be overestimated,



→ **Table 1 » Preferred forms of spending free time by students and their level of education (N = 521)**

Response categories / Ranking position	I	II	III	IV	V	VI	Number of choices	Point value	Average choice	Rank
A. Watching TV	61 59	45 63	46 70	25 54	22 29	10 10	209 285	904 1179	4,33 4,13	I II
B. Playing computer games	56 63	51 68	31 41	34 22	25 42	14 43	211 279	881 1075	4,18 3,85	II III
C. Internet surfing	29 78	45 58	51 61	33 41	30 27	12 19	200 284	774 1198	3,87 4,21	IV I
D. Playing sports	63 21	26 30	33 42	46 75	20 49	11 18	199 235	829 785	4,16 3,34	III V
E. Social gatherings	14 21	40 30	19 34	40 46	61 98	41 42	215 271	643 788	2,99 2,90	V IV
F. Reading	21 29	4 22	16 27	17 35	20 28	68 136	146 277	369 689	2,52 2,48	VI VI

Each category has been divided into two lines, the top of which gives the number of choices made by primary school students, the bottom one by lower secondary school students. The number of respondents choosing a given category is different each time, as some students chose categories with the same rank or did not choose a given answer. A scale of 1–6 points was adopted, where: 6 points — 1st place in the selection, 5 points — II, 4 points — III, 3 points — IV, 2 points — V, 1 point — VI.

Table 2 » Time devoted to watching TV during the day, according to students (N = 521)

Response Category	Primary schools (N = 229)	Secondary schools (N = 292)
A. I don't use it every day	6,6 %	15,8 %
B. Up to 1 hour	18,8 %	14,4 %
C. 2–3 hours	58,9 %	46,6 %
D. 4–5 hours	8,7 %	7,8 %
E. More than 5 hours	7,0 %	15,4%
F. Total	100 %	100 %

to the exclusion of other, equally important forms of cognition, because, according to research, other categories such as playing sports, socializing or reading occupy a remote place in the above choices of students. Besides, the next question about the amount of time devoted to the use of media prompts us to consider the actual use of these media, not only for educational purposes.

Research shows that television absorbs the time of more than half of primary school children and

almost half of junior high school children, who spend 2 to 3 hours watching a day. Among junior high school students who selected the categories 'I do not use every day' or 'up to 1 hour', over 30% say that they highlighted these options, because they watch most movies and entertainment on the Internet anyway, so they use TV programs sporadically. This confirms my assumptions that the media is mainly used by young people for entertainment purposes.

A group of children are students who admit to watching TV for more than 5 hours a day. One student wrote: *We have the TV on all day, because dad says he has to play something* (boy, class V, rural environment). The results of the surveys show that in some homes, everyday life is subordinated to the television program. The same applies to using a computer or tablet.

As one can see, among younger children from grades IV–VI, more than 40% spend 2–3 hours a day with a computer / tablet. In turn, more than half of the surveyed lower secondary school students admit to using 4–5 hours a day, and almost 10% even longer.

The results of these studies are in line with the results of the research conducted by the Public Opinion Research Center (CBOS) in 2018. The Report shows that the youngest children 6–12 years old spend about 14 hours a week on the Internet, children aged 13–15 years 21 hours a week, and young people 16–19 years old 28 hours a week. The poll conducted among its users of the Dzieciaki.pl website shows that most children spend 1–2 hours a day playing games or surfing the Internet, while every tenth child spends more than 5 hours a day on the computer (Romanowska and Lis, 2015, p. 13).

The above research results indicate the fact that today's children develop 'telemaniac syndrome', unable to function without the media. Unfortunately, apart from the undoubted advantages in

the form of a source of knowledge, information and entertainment, they are also a vehicle of toxic mass culture, displacing the so-called high culture. The media today constitute a kind of 'lens' through which children indiscriminately absorb the surrounding social reality. The way of seeing promoted by the media influences their interpretation of the surrounding world (Dobrołowicz, 2014, p. 142; Koźmińska and Olszewska, p. 172).

A study by AVG Technologies, an online security company, from May 2012, conducted on a sample of 2,200 mothers of children aged 2–5, showed that tablet children have problems with everyday activities. It turned out that much more 5-year-olds can use a smartphone and a mouse than swim and tie shoelaces (Romanowska and Lis, 2015, p. 12). Difficulties with functioning in everyday life are also confirmed by neurobiologists, who have proven how the brain of a teenager interacting intensively with electronic gadgets differs. In such people, certain parts of the brain may not develop. The frontal cortex, which is responsible for emotional control, rational thinking, decision making, and cognitive functions, is less developed. Due to its underdevelopment, young people may behave aggressively. They also often have problems with peer relationships (Romanowska and Lis, 2015, p. 14).

At this point, I would like to refer to the results of the research in table 1, where the social aspect in the form of the 'social meetings' category took

Table 3 » Time allocated to using a computer / tablet during the day (N = 518)

Response Category	Primary schools (N=226)	Secondary schools (N=292)
A. I don't use it every day	11,7 %	6,2 %
B. Up to 1 hour	31,9 %	8,4 %
C. 2-3 hours	42,5 %	23,3 %
D. 4-5 hours	10,5 %	52,5 %
E. More than 5 hours	3,4 %	9,6 %
F. Total	100 %	100 %

The number of respondents in the above survey has changed because three primary school students (from a rural environment) do not have a computer at home.



→ the distant fourth place in the case of junior high school students, and fifth place in the case of younger students. It would seem that for young people contacts with the peer group is a priority category. However, this result suggests that for today's children, the media is of greater value than social relations that are being reduced. More and more young people who devote most of their free time to presence in the media limit their contacts to sending text messages, e-mails, Facebook conversations, and not direct, interpersonal contact with people. Therefore, it is difficult to agree entirely with A. S. Reber, according to whom the media play a very important role in socialization *in the process of acquiring knowledge, value system, language proficiency, social skills and social sensitivity by an individual, which allows one to integrate with society and adapt adaptively to it* (Reber, 2002, p. 665).

The above results contradict this integration. Under the influence of excessive exposure to the

media, the lifestyle and interpersonal contacts change. An anomy society is created where basic interpersonal ties break apart. It is an extremely important problem of the present day that requires more extensive verification.

I would like to draw attention to the result of the last category among the forms of spending free time listed by students. The analysis of the research results shows that in the choices of students at both levels of education, readership is at the bottom of the list. The respondents were asked about their passion for reading.

There are significant differences in the responses of students at both levels of education. If we combine the positive categories in terms of passion for reading, i.e. 'I like' and 'I like', it turns out that in primary schools it accounts for over 50% of the research sample, which is not a satisfactory result. The analysis of the questionnaires also allowed to state that the willingness to read is displayed mostly by younger children, in this case the fourth

Table 4 » Passion for reading among students and the level of education (N = 521)

Response Category	Primary schools	Secondary Schools
A. Like very much	21,4 %	10,6 %
B. Like	29,7 %	15,4 %
C. Medium	32,8 %	43,2 %
D. Don't like	16,2 %	30,8 %
Total	100 %	100 %

Table 5 » Average number of books read during the month and the level of education (N = 521)

Response category	Primary schools	Secondary schools
A. None	11,8 %	26,0 %
B. One	31,9 %	41,4 %
C. 2–3	34,5 %	22,3 %
D. 4–5	10,5 %	4,5 %
E. Over 5	11,4 %	5,8 %
F. Total	100 %	100 %

grade (almost 70 %) surveyed, while the older the child, the less his love of reading decreases. This is especially visible in the results of research in lower secondary schools, where only 26% of students declare a positive attitude to reading.

The above results also show that almost 1/3 of the surveyed lower secondary school students have a negative attitude to reading. These results correspond to the previous ones, which place reading in the last place among the forms of spending free time. This is the more worrying phenomenon as the increase in knowledge in lower secondary schools is increasing, which requires frequent reading, reading, analyzing and drawing conclusions. Students were also asked about the average number of books read per month.

The results show some discrepancy between the number of books read in primary and lower secondary schools. Most primary school students, 34.5%, declare that they read 2–3 books a month. Due to the systematic decline in readership, many schools (also the researched ones) currently run reading programs which assume that each student, apart from compulsory reading, must present at least one book of their choice per month. As you can see, this form is beginning to bear fruit, although it is difficult to resist the impression that it is a bit 'forcible', and not a result of the child's natural need to read.

On the other hand, in lower secondary schools, over 40% of respondents declare reading one book a month, which would seem to be a satisfactory result. However, the analysis of the questionnaires showed that the majority of people in this group are literally forced to read through compulsory reading (61%). There were statements like:

- *I only read the obligatory reading, because I have to* (girl, 1st class of middle school).
- *I only read as much as I have readings* (boy, 2nd grade of junior high school).
- *I don't like reading because the letters jump in front of my eyes. More than once I read a reading how thin it is* (boy, 1st grade of junior high school).

However, the result that shows that almost 12% of children in primary schools and 26% in lower secondary schools have not read any book is worrying. Additionally, the analysis of the results of the research among the group of middle school students who do not read shows that 20.4% did not read any book or magazine, and that in a year. This result raises the question of how it is possible to function in school without reading anything and how it bodes for the future for the student.

A person deprived of this cognitive tool is doomed to social exclusion. Being able to read, that is, to use written language, opens the way to formal and informal education. These two paths, in turn, are largely responsible for our position in the social world. Apart from the key to knowing, reading is also a gateway to the world of emotions, imagination and morality. It certainly influences who we are (Murawska, 2011, p. 5).

The above results and statements provoke the question: then how do young people prepare for classes? In the context of the above-mentioned research on media priority, it can be concluded that this group uses the internet library more or less consciously. Unfortunately, the messages posted there are not always fully reliable. Sometimes they are laconic and little scientific studies that do not contribute to deepening knowledge, and therefore should not constitute the primary source of knowledge. In everyday use, modern children are referred to as the 'copy-paste generation', because more and more often young people's essays constitute an online cheat sheet, not to mention a book, which is replaced by an abstract posted on the Internet. Microsoft's founder Bill Gates once said: *'Of course my kids will have computers, but there will be books first'* (Kozmińska and Olszewska, 2010, p. 196).

The above results clearly show that the media has replaced reading. Lack of contact with a book may be the reason for the more and more common phenomenon of functional illiteracy. Although people can read, they do not understand the content, they are unable to apply the acquired knowl-





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edge in everyday use, and they have a poor language that prevents efficient communication. It is a kind of 'intellectual disability' that can affect the whole future of a young person: problems with education, choice of profession, general functioning in society.

The example comes from above. Adults themselves are also not very eager to read books. This is evidenced by the results of research on reading conducted systematically by the National Library. In 2017, as in previous years, research conducted on a sample of over 3,000 people over the age of 15 showed that 62% of adult Poles did not read a single book during the year. In addition, the authors, based on subsequent editions of the survey, state that if someone grows up within the circle of readers, he has a greater chance of becoming a reader in adulthood. In a reading environment as many as 82% of people also read books, while in homes where there is no reading culture, it is only 13% (Koryś, 2018).

But television and other media so eagerly used by parents in the process of parenting will not solve the problems. On the contrary, uncontrolled use of them for many hours a day destabilizes the child emotionally, causes significant changes in his psyche, which can be a permanent damage for life. It is also conducive to addiction, the mechanism of which is described by the theory of allostasis or the Ball-Rockeach and Defluer addiction model. This phenomenon is also referred to by D. McQuail, in his theory of mass communication,

who wrote that excessive use of the media leads to detachment from reality, weakening social ties, neglecting learning and abandoning more valuable activities (McQuail, 2008, p. 400).

4. Conclusions

The research results presented above are not optimistic. They reveal the mechanisms of a child's rather passive functioning in their free time, which is intended mainly for communing with the media world. This aspect of mass culture causes more and more interference in the life of the family, taking time, promoting other values, often anti-values, causing addiction and the breakdown of interpersonal relationships. Siemieniecki (1998, p. 49) wrote: *the dialogue of a child or an adult with a computer creates a specific system with its character resembling the mechanism of a subculture. Children working on home computers create a specific family atmosphere. A certain rhythm of life, work and interests is born here.*

The most important and difficult point is to raise awareness of parental responsibility. Parents' pursuit of work, money, career, and above all their absence in the life of a child, cause that modern children suffer from emotional anemia. The child cannot rely solely on himself, but needs to devote a lot of time and attention to proper development.

The problem is also often the lack of knowledge and determination on the part of parents who are unable to oppose harmful fashion trends. Some-

times they are not aware of the dangers of unlimited access to content and the time of using the media uncontrolled by adults. Therefore, what is needed is broadly understood media education. It should include not only education by the media in the aspect of a positive message about the knowledge of the world and its values, but also education in the sense of the ability to use them wisely, with the removal of socially undesirable patterns and attitudes, consequently leading to both cognitive and emotional desensitization. In this respect, a lot of good can be done by educational institutions such as kindergartens or schools and specialists working in them, who should strive to raise the awareness of parents by organizing meetings, talks and workshops. Unfortunately, a common prob-

lem is the lack of parental involvement. Despite the actions taken by the institutions, parents do not want to cooperate, being of the opinion that these matters do not concern them. Thus, another problem arises, this time cooperation with parents, which is sometimes fictional and limited to their participation only in group meetings. Despite these difficulties, parents should be encouraged to work closely together and made aware that we, the adults, play the most important role in being a guide and interpreter of our children's world.

It should also be emphasized that the perturbations in the functioning of education systems as a consequence of the pandemic in 2020 and 2021 only intensified the negative aspects of the phenomena described.

REFERENCES

- [1] ADAMSKI, F.: *Rodzina. Wymiar społeczno-kulturowy*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego, 2002.
- [2] DOBROŁOWICZ, J.: *Mediatyzacja współczesności a procesy socjalizacji i wychowania*. Paedagogia Christiana, 2014, 34.
- [3] GÓRSKI, G.: U źródeł nowoczesności czyli o XI i XII wiecznym przełomie w dziejach prawa w ujęciu H. M. Bermiana. *Prawo – Administracja – Kościół*, 2000, 2-3.
- [4] KORYŚ, I.: *Stan czytelnictwa w Polsce w 2017 roku*. Warszawa: Biblioteka Narodowa, 2018.
- [5] KOŹMIŃSKA, I., OLSZEWSKA, E.: *Wychowanie przez czytanie*. Warszawa: Świat Książki, 2010.
- [6] KWIATKOWSKA, H.: *Tożsamość nauczycieli. Między anomią a autonomią*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne, 2005.
- [7] McQUAIL, D.: *Teoria komunikowania masowego*. Warszawa: PWN, 2008.
- [8] MURAWSKA, B.: *Pozwólmy dzieciom czytać*. Warszawa: Centralna Komisja Egzaminacyjna, 2011.
- [9] NALASKOWSKI, A.: *Edukacja. Korzenie-źródła – narracje*. Kraków: Impuls, 2017.
- [10] PALMER, S.: *Toksyczne dzieciństwo. Jak współczesny świat krzywdzi nasze dzieci i co możemy zrobić, aby temu zapobiec*. Wrocław: Wydawnictwo Dolnośląskie, 2006.
- [11] REBER, A. S.: *Słownik psychologii*. Warszawa: Wydawnictwo Naukowe Scholar, 2002.
- [12] ROMANOWSKA, D., LIS, E.: *Tabletowe dzieci*. Newsweek, 2015, 31.
- [13] SIEMIENIECKI, B.: *Perspektywa edukacji z komputerem*. Toruń: Wydawnictwo A. Marszałek, 1998.
- [14] SZATUR-JAWORSKA, B., BŁĘDOWSKI, P., DZIEGIELEWSKA, M.: *Podstawy gerontologii społecznej*. Warszawa: Oficyna Wydawnicza Aspra-Jr., 2006.

The Tablet-Like Childhood – a Chance or a Threat?

ABSTRACT

The paper constitutes a certain reflect on a contemporary model of upbringing and participation of children in a mass culture society that resolutely dominates the today's reality. The above problematic aspects formed



- *a basis for an investigation of how do the Polish children really function within their leisure time, what type of activities are they concerned with, and finally, what are their true preferences and personal interests and to what extent is their leisure time reclaimed by their parents.*

KEYWORDS

Childhood; media; readership; family upbringing

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Pedagogy of Culture or Pedagogy of Postculture? Contemporary Dispute over the Shape of Discipline

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* 1. Introduction

In the last thirty years, in the literature devoted to the issues of cultural education, a discourse developed which I dare to call – although it may sound a bit high-profile – a dispute about value. Researchers, doubting the sense of the existence of the discipline called ‘pedagogy of culture’ in its current shape, postulate its complete metamorphosis. These changes – according to these authors – ‘force’, as it were, a contemporary culture constantly evolving before our eyes, taking the form of the so-called ‘Post-culture’.

It is worth noting that one of the threads of this discussion is popular culture – a cultural phenomenon so controversial that it still raises extreme emotions of polemicists (both its critics and enthusiasts). In this article, I will try to recapitulate the aforementioned contemporary culture dispute – axiological dispute – and also take the floor in the discussion we are interested in – the discussion on the future of cultural pedagogy.

2. Cultural neopedagogy or new humanism?

Janusz Gajda in the book *Pedagogika kultury w zarysie*, which was supposed to be an academic handbook, derived the history of the discipline from the ancient Greek *paideia* and philosophy of

Wilhelm Dilthey from the late nineteenth century. The researcher defined the subject of cultural pedagogy as: ‘[...] the educational process based on the meeting of a human individual with cultural goods, which leads to interiorization of the values presented in them. The result is the enrichment of human spiritual strength and the creation of new values. [...] Education is to prepare people (individual units) for active, creative participation in cultural chewing, it is introducing into the world of supra-individual values, assimilating them, shaping the ideal of culture, enriching and developing spiritual strength. [...] Simplifying, it can be said that cultural pedagogy – in contrast to general pedagogy and didactics – education is broadly understood. It combines teaching and education with upbringing’ (Gajda, 2006, p. 17).

In this approach, pedagogy of culture appears as a discipline strongly rooted in axiology, as ‘education to supra-individual values’, and therefore objective values, which are internalized by man in the process of learning and ‘experiencing’ culture. And although cultural reality is changing (Gajda devotes one chapter of his book to discussing these changes taking place under the influence of mass and popular culture, influenced by mass media and hypermedia), the researcher states: ‘There does not seem to be a need today to revise the classical concept *paideia*’. But in a moment he adds →

→ that these cultural changes force *'[...] a different understanding of the implementation of paideia – by referring primarily to contemporary popular values presented by popular culture and shaping an open attitude towards changes taking place, without prejudice to traditional humanistic values'* (Gajda, 2006, p. 170).

The author in outline creates a vision of a kind of 'neo-pedagogy of culture' or 'new humanism', which should – in addition to spiritual and absolute values – also take into account utilitarian and consumer values, because it is *'a necessary step forward in terms of humanism, a natural evolution in saving him before being rejected by society [...]'* (Gajda, 2006, p. 172). Utilitarian and consumer values, according to Gajda, *'do not have to contribute to the degradation of the human person, on the contrary – they can serve to build a decent life and high-quality society if they are harmoniously combined with absolute values'* (Gajda, 2006, p. 173).¹

Here the question arises: is this bold proposition right? In other words: is it possible for cultural educators to refer to those 'contemporary values' offered by popular culture while maintaining traditional humanistic values? Are these values not mutually exclusive? Gajda himself – in the excerpt of the book cited earlier – defines pedagogy of culture as a learning process, the result of which is *'enriching the spiritual strength of man'*. In this context, one would like to ask the question – what 'spiritual strength' is popular culture, according to the researcher?

3. Pedagogy of culture and postmodernism

It seems that researchers such as Jakubowski (2006) and Melosik (1995) go even further than Janusz Gajda, who proposed to teachers a kind of

'reconciliation' of two orders of values: utilitarian and absolute. Melosik completely abstracts from the topic of the interiorization of absolute values understood as the purpose of education. According to this researcher, *'[...] popular culture and its heroes are a source of meaning for everyday life and community for the young generation'* and it is not worth wondering if this is a good or bad phenomenon (Melosik, 1995, p. 236). 'This approach', Melosik continues, *'avoids the destructive collision of arbitrary systems of concepts and values of 'all-knowing' educators with the imagination of young people [...]'* (Melosik, 1995, p. 236).

The researcher's ironic words about 'all-knowing educators' and 'arbitrary systems of concepts and values' undoubtedly send us back to the world of postmodern philosophy (and ideology) – because it is postmodern approach to culture that by definition resigns from the search for truth – *'primary and most important value in the field of axiology'* (Kowalczyk, 2004, p. 333). As Kowalczyk (2004) points out, referring to the thought of Richard Rorty, *'This trend captures culture in a functional and utilitarian manner'*.

From a postmodern perspective, culture *'is not based on eternal standards, because there are no permanent and universal criteria of truth, good or beauty'* (Kowalczyk, 2004, p. 333) – and let us remind you that these three values were central to classical culture derived from Greek-Roman antiquity; Christianity adds to its vision of culture its sacred and transcendent dimension (see Kowalczyk, 2004, p. 333).²

Thus, postmodern philosophy also takes us somewhere to the antipodes of understanding the teacher as a master and tutor, who introduces his students into the space of so-called canon of culture, which is also a specific axiological space. Zei-

¹ Elsewhere, Gajda (2002, p. 20), reflecting on 'culture as a commodity' in postmodern reality, notes — in reference to the thoughts of Zygmunt Bauman — that this is actually a 'random and opaque' world, that there is a relativization of 'all norms and cultural models'. And at the same time he asks rhetorically: 'But has human life ever been different?'

² Jerzy Bagrowicz reminds that the ideal of Christian personalist education is the opening of man to 'good, truth and beauty', participation in these values and their realization, and at the same time making a choice 'in accordance with their hierarchical system: from the lowest (material) values spiritual towards absolute values' (Bagrowicz, 2012, p. 178; for interesting remarks on the civilization roots of personalistic education, see also Górski, 2004, p. 75–78).

dler-Janiszewska (1995) — again, not without a note of irony — even states that so far pedagogues were focused mainly on ‘reproducing the cultural canon’, so modern educational reality requires from them ‘*significant changes in the system of values and competences*’ (Zeidler-Janiszewska, 1995, p. 14). Not only that, from this perspective, educators who stick to the classic humanitas appear as representatives of cultural fundamentalism dividing cultural reality into good and bad (Jakubowski, 2006, p. 10).

What is the mentioned canon of culture that traditionalists try to ‘reproduce’ in the education process? Of course, this is a space which, after Jerzy Bagrowicz, can be described as Europe’s ‘great cultural tradition’ (with Greek-Roman antiquity and Judeo-Christian culture at the forefront), and from which the modern man is eradicated to such an extent that it becomes for him alien reality, while the existing cultural codes embedded in tradition are becoming vague and illegible (see Bagrowicz, 2012, p. 171).³

4. Postculture pedagogy?

The phenomenon of outdating the concept of culture, but also the pedagogy of culture in its current shape, has also become the subject of interest of Piotrowski and Górniewicz (2015). They state *expressis verbis* that pedagogy of culture, in its form derived from the first half of the twentieth century and transferred to modern times, ‘*somewhat resembles a museum object*’. In addition, it seems to be ‘*attractive and intellectually appealing only to its followers, propagators, lovers, historians of ideas*’ (Piotrowski and Górniewicz, 2015, p. 119).

As a side note, it must be admitted that this is a fairly arbitrary opinion, derived from a particular ideology. According to Piotrowski and Górniewicz, the cultural pedagogy project developed in the interwar period does not match the contemporary cultural situation, but rather the post-cultural one⁴, while the authors, as it seems, by writing about ‘postculture’ build de facto image of postmodern culture — a picture of a world with no fixed points support and in which axiological relativism prevails (see Pankowska, 2013, p. 178).

According to these authors, the master-student relationship, important for pedagogy of culture, is becoming outdated nowadays (Piotrowski and Górniewicz, 2015, p. 128), but also *paideia* — understood as an educational ideal — is becoming obsolete, and if it still exists — somewhere ‘*on the margins of life public*’. Because ‘*it no longer drives television debates, it does not excite viewers, it is not the object of desirable information on the Internet. It is one of the millions of entries in Wikipedia*’ (Piotrowski and Górniewicz, 2015, p. 129). Similarly, on the outskirts of postculture there are also axiological issues: traditional moral values are replaced by the desire for a subjective ‘sense of satisfaction’ (Piotrowski and Górniewicz, 2015, p. 129), and the ‘normativity’ that has been present in culture so far ‘*dissolves in fumes [...] axiological indifference of researchers*’ (Piotrowski and Górniewicz, 2015, p. 140). Thus, the authors of Pedagogy of Culture and Postculture fit into the previously signaled postmodern cultural narrative. →

³ This process is accompanied by the phenomenon of axiological uprooting, and yet, as Jerzy Bagrowicz emphasizes in reference to the words of John Paul II, we are called to remember those values that have shaped human culture for thousands of years and led him to a constant effort to become more human (see, Bagrowicz, 2012, p. 174).

⁴ Postculture has been called here a collection of cultural phenomena or phenomena related to culture, which phenomena affect in an unprecedented way on the shape and functioning of many cultural institutions, on the course of a number of ongoing cultural processes. [...] what has been called postculture here, and which perhaps marks the coming or coming of a new era in the history of mankind, is somewhat detached from the traditionally understood culture — a resource of ordered humanity’s most important experiences, acquired and accumulated throughout the intergenerational transmission its past history (see, Piotrowski and Górniewicz, 2015, p. 6).

→ 5. What is the future of cultural pedagogy based on this background?

Simone Weil, an outstanding philosopher of the last century, made an interesting diagnosis referring to the first half of the twentieth century, but in my opinion it is still very current. It is recalled by Czesław Miłosz in one of his essays from the volume *Testimony of Poetry* (and it is worth emphasizing that the poet himself in his work has repeatedly opposed the vision of a man immersed in a nihilistic void)⁵: *The main feature of the first half of the 20th century is the weakening and almost disappearance of the concept of value. This is one of those rare phenomena that seems to be really new to the history of the human species. Naturally, this phenomenon could have existed in periods that then fell into oblivion, just as it may be in our age. This phenomenon manifested itself in various fields of foreign literature, and even in all areas. It was observed in industrial production, where quality was replaced by quantity; [...] in replacing general culture with diplomas, as seen in students. Even science no longer has a criterion of value since the end of classical science* (Miłosz, 1987, p. 56).

So let's move to the 21st century and add to this repertoire of areas in which the concept of values disappears, as well as cultural pedagogy. Before our eyes it changes into 'pedagogy of postculture', a nihilistic creation that adheres to axiological relativism. As a side note, I would add that I am putting myself at risk here for many postmodern educators who might think that I am making an 'apocalyptic' diagnosis of the present. Witold Jakubowski was accused of this apocalyptic perspective by Mieczysław Gałas, who wrote in one of his articles that contemporary mass culture carries the risk of impoverishing human development (see Jakubowski, 2006, p. 8).

The examples of statements by contemporary culture educators quoted in the above considerations show that the discussion that can be traced in the latest literature on the subject is not so much an academic dispute about the shape of modern 'pedagogy of culture' as, above all, a dispute about (the non-) presence of supra-individual values in culture. There is no doubt that, in essence, it is also a space of clash of two fundamentally different worldviews: conservative and utilitarian-liberal.

Here we come to the key questions: in the face of relativization of values in contemporary culture, should a cultural educator be the one who stays true to the classical definition of *paideia*? Should he rather adopt postmodern optics and agree on a lack of permanent axiological reference points in the upbringing and education of young people? And since utilitarian values occupy a primitive place in contemporary popular culture, is the role of the pedagogue referring to those values in his educational and educational practice — whereas this may be the only guarantor of intergenerational agreement?

There is no shortage of educators today who could be — in the language of Czesław Miłosz — known as '*the backguard defending the discrimination of values*' (Miłosz, 1987, p. 58). They perceive educational threats resulting from axiological relativism characteristic of 'postculture'. And so Jerzy Bagrowicz emphasizes that postmodern man, facing a world in which all values are relativized, seeks his individual life goal with great difficulty. '*Thus, the optimistic vision of a man shaping his history in complete freedom, disseminated in postmodernism, overshadow the problems related to the sense, or rather the senselessness of life*', concludes the researcher (Bagrowicz, 2012, p. 173).

In turn, Pankowska (2013) states that the mentioned phenomenon of axiological shaking of real-

⁵ Reflections on this subject can be found in many different places of the author of *Ulro Land*. See. eg: 'I wrote a lot about deprivation as one of the effects of science and technology that not only pollutes the natural environment, but also human imagination. The world without clear contours, top and bottom, good and evil, is subject to special nihilization, that is, it becomes colorless, gray covers the things of this earth and all space [...]' (Miłosz, 1994, p. 7).

ity is 'highly disturbing and dangerous when it comes to education. For if there is no specific hierarchy of values, there is nothing to refer to, it is not possible to bring up, and certainly upbringing is much more difficult than fundamentalist upbringing, referring to strictly defined content and principles'. The fruit of such a 'postcultural' pedagogical process in its essence can only be — as the researcher rightly pointed out — homo postmodernicus, i.e. 'a man without principles, without a homeland, nihilist and relativist' (Pankowska, 2013, p. 154), who — like a hero Tadeusz Różewicz's poem — 'falls in all directions / at the same time [...] in the shape of a wind rose' (Pankowska, 2013, p. 169), finding no solid support in the surrounding reality.

There is no doubt that a modern educator should be perfectly familiar with the pop culture space, which for many young people becomes the

only known and accepted educational environment (Pankowska, 2013, p. 218). But not to uncritically come to terms with the fact that popular culture and its values are served by 'primary strength' (Jakubowski, 2016, p. 10), a determinant of the life of a modern young man, but rather in order to make the students realize that — to paraphrase the words of Zbigniew Herbert's poem Why the classics — the only topic of culture cannot be 'broken jug / small broken soul / with great regret', because then 'what will be left after us / will be like the crying of lovers / in a small dirty hotel / when the wallpapers dawn' (Herbert, 2004). After all, we want something more. That is why it is worth returning to the classics in the cultural education process, returning to the canon of culture, reinterpreting it again and looking for pedagogical inspirations in it.

In the last thirty years, in the literature devoted to the issues of cultural education, a discourse developed which I dare to call — although it may sound a bit high-profile — a dispute about value. Researchers, doubting the sense of the existence of the discipline called 'pedagogy of culture' in its current shape, postulate its complete metamorphosis. These changes — according to these authors — 'force', as it were, a contemporary culture constantly evolving before our eyes, taking the form of the so-called 'Post-culture'.

REFERENCES

- [1] BAGROWICZ, J.: Chrześcijańskie wychowanie personalistyczne. In *Wychowanie do wartości w świecie cyberkultury*. Toruń: Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, 2012.
- [2] DRYGLAS-KOMOROWSKA, E.: I'm looking for a teacher and a master' — tutoring in the face of contemporary culture challenges. *21st Century Pedagogy*, 2018, 2.
- [3] GAJDA, J.: *Media w edukacji*. Warszawa: Wyższa Szkoła Pedagogiczna ZNP, 2002.
- [4] GAJDA, J.: *Pedagogika kultury w zarysie*. Warszawa: Wyższa Szkoła Pedagogiczna ZNP, 2006.
- [5] GAŁAŚ, M.: Edukacja kulturalna jako wyzwanie współczesności. *Edukacja*, 1999, 3.
- [6] GOLKA, M.: *Socjologia kultury*. Warszawa: Wydawnictwo Naukowe Scholar, 2007.
- [7] GÓRSKI, G.: *Europejska Republica Christiana od końca X do końca XIII wieku*, Lwów, 2004.
- [8] HERBERT, Z.: *Wiersze wybrane*. Kraków: Wydawnictwo a5, 2005.
- [9] JAKUBOWSKI, W.: *Edukacja w świecie kultury popularnej*. Kraków: Oficyna Wydawnicza 'Impuls', 2006.



- [10] JAKUBOWSKI, W.: *Pedagogika kultury popularnej – teorie, metody i obszary badań*. Kraków: Oficyna Wydawnicza 'Impuls', 2016.
- [11] KOWALCZYK, S.: Etyka postmodernizmu. *Idō – Ruch dla Kultury: rocznik naukowy*, 2004, 4.
- [12] MELOSIK, Z.: *Postmodernistyczne kontrowersje wokół edukacji*. Toruń: 'Edytor', 1995.
- [13] MIŁOSZ, C.: *Świadection poezji: sześć wykładów o dotkliwościach naszego wieku*. Warszawa: 'Czytelnik', 1987.
- [14] MIŁOSZ, C.: *Wypisy z ksiąg użytecznych*. Kraków: Wydawnictwo Znak, 1994.
- [15] PANKOWSKA, K.: *Kultura – sztuka – edukacja w świecie zmian. Refleksje antropologiczno-pedagogiczne*. Warszawa: Wydawnictwa Uniwersytetu Warszawskiego, 2013.
- [16] PIOTROWSKI, P., GÓRNIOWICZ, J.: *Pedagogika kultury i postkultury. Idee i przemiany kulturowe*. Olsztyn: Centrum Badań Społecznych UWM – Wydział Nauk Społecznych UWM, 2015.
- [17] SIEMIENIECKI, B.: *Edukacja medialna w świecie ponowoczesnym*. Toruń: Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, 2012.
- [18] ŚLEZIŃSKA, A.: Dwie drogi starożytnej paidei. *Konteksty Kultury*, 2013, 10(1–2).
- [19] ZEIDLER-JANISZEWSKA, A.: Szanse pedagogiki w ponowoczesnym świecie. In *Postmodernistyczne kontrowersje wokół edukacji*. Toruń: 'Edytor', 1995.

Pedagogy of Culture or Pedagogy of Postculture? Contemporary Dispute over the Shape of Discipline

ABSTRACT

The article aims to bring closer the discussion that has swept the last three decades through Polish-language literature on cultural pedagogy – a discussion about the future of the discipline. It turns out that it has in fact acquired the nature of an important axiological dispute related to the question of the presence or absence of objective values in the field of cultural education. Therefore, we remain here in the circle of the problems of the clash of two different visions of culture: postmodern (characterized by axiological relativism) and traditionalist, derived from ancient paideia and Christian personalism.

KEYWORDS

Pedagogy of culture; cultural education; contemporary culture; Postculture; postmodern culture; values in culture; axiology; education to values

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Constructivism as an interesting perspective in preschool education

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* 1. Introduction

In recent years, it has been increasingly said that a child's school success begins in kindergarten. Therefore, there is no need to convince anyone that attending kindergarten has a positive effect on their school achievements. This is due to the fact that pre-school education gives each child individual benefits related to the cognitive, emotional and social development of a young child. It also creates opportunities for a few-year-old to get to know closer and further reality, to understand, explain and interpret it. It is also important to trigger the child's multifaceted activity in preschool education and introduce him to such educational situations in which he will have the opportunity not only to acquire ready-made knowledge about the world from various sources of information, but also to create and construct it in interaction with the social environment. This will happen when the teacher in his pedagogical endeavors refers to the idea of constructivism. This is important because constructivism explains the way people learn and learn about the world. Besides, constructivism allows a child to be *'a scientist, explorer, author of questions; makes a decisive contribution to interpreting and organizing the world and its own development'* (Wadsworth, p. 15).

Hence, the main task of a kindergarten teacher is to introduce the child to such educational situa-

tions in which he will be able to create and construct knowledge about the world in interaction with the social environment. Michalak and Misiorna (2003, p. 69-72) claim that the teacher should also stimulate the child's thinking by arranging educational situations based on cognitive conflict, encourage dialogue and cultivate the natural cognitive curiosity of a young child. From this it can be seen that constructivism is a promising cognitive and didactic perspective, and therefore it is advisable to refer to this idea in the education of the youngest children.

2. Constructivism

Pre-school children not only acquire knowledge about closer and further reality from various sources of information, but also want to discover it, search for it, construct it by interacting with the social environment. Therefore, it is advisable in pre-school education to refer to the idea of constructivism, which is a source of invigorating change.

The idea of constructivism was formed in the 1960s, and in the first and second decades of the 21st century, there was a great interest in this approach to education. It happened thanks to Stanisław Dylak, who pointed out that constructivism is a promising prospect in teacher education.

Constructivism is not a homogeneous theoretical trend, as it consists of many varieties and frag-



ments. In these considerations, attention will be focused on the psychological constructivism in which strategies such as:

- teaching focused on the zone of immediate development — the concept of Lev Vygotsky,
- cognitive and developmental theory by Jean Piaget,
- building scaffolding — the concept of Jerome Bruner and David Wood.

Teaching focused on the zone of immediate development is a strategy developed by the Russian psychologist Lev Vygotsky (1896–1934). He believed that teaching is the driving force of a child's development as it creates new mental structures and shapes mental processes. This is done in the situations of cooperation of the child with adults, as well as through his contact with the social environment, so that, as a result of internal development, certain functions become the internal achievements of the child himself.

A preschool child, according to L. Vygotsky, learns in a spontaneous-reactive way, so he acquires knowledge about some fragments of reality according to his own program, and from others according to the program prepared by the teacher. Therefore, in pedagogical work, not only the child's spontaneous learning should be taken into account, but also systematic activities that stimulate and create conditions for the transition from the lower to the higher stages, and sometimes also contribute to the avoidance of certain transition stages in the development of a specific activity. It should also be remembered that *'each higher men-*

tal function appears in development twice, once as a team activity, that is as an interpsychic function, the second time as an individual activity, as a child's internal way of thinking, as an intrapsychic function' (Vygotski, 1971, p. 544).

In order to support the development of all spheres of the child's personality and to equalize its educational chances, it is necessary to define the zone of its current development and the zone of its immediate development. The area of current development is revealed in the type and level of the tasks undertaken and performed by the child independently and in the mental functions shaped in completed development cycles. The zone of immediate development was described by Lev Vygotsky as follows: *'What a child can do with the help of adults indicates the zone of immediate development. Thanks to the use of such a method, we can therefore take into account not only the currently completed development process, not only the cycles already completed and the maturing processes completed, but also processes in the state of formation, processes that are just maturing, are just developing. What the child is doing today with the help of adults, he will do tomorrow on his own. The zone of the nearest development helps to define the future of the child's development, the dynamic state of its development, which takes into account not only what the child has achieved in this process, but also what is still maturing in it'* (Vygotsky, 1971, p. 542)

The educational consequence of Lev Vygotsky's theory is that teaching is organized in such a way

In recent years, it has been increasingly said that a child's school success begins in kindergarten. Therefore, there is no need to convince anyone that attending kindergarten has a positive effect on their school achievements. This is due to the fact that pre-school education gives each child individual benefits related to the cognitive, emotional and social development of a young child. It also creates opportunities for a few-year-old to get to know closer and further reality, to understand, explain and interpret it.

that the child has the opportunity to act on subjects and interact socially with adults and peers. These activities and experiences of the child acquired in direct cognitive and social contacts with objects, adults and peers, combined with emotions, are of particular importance. Thanks to this, the child's development will take place through transformations and external activities into internal mental activities. In preschool education, it is also important to define the area of the child's closest development, as it allows the process of gaining knowledge for a few-year-old child to be based on maturing functions, and in the educational and didactic process to include learning from patterns more widely, through imitation and with the help of a teacher. Thanks to this, children can do more and better than on their own, and this determines their development possibilities.

In preschool education, it is important that the teacher supports the child in development, which makes it an active and searching subject. The teacher also helps the little-year-old to undertake more difficult activities and thus stimulates the process of developing the mental functions that lie dormant in him. The observation of the child during various tasks is also of particular importance, as it enables the teacher to grasp the action program that the child uses, his individual cognitive style, and then take it into account in the teaching work of the kindergarten.

The creator of the cognitive and developmental theory is Jean Piaget (1896–1980), a Swiss psychologist, professor at the University of Geneva. This theory has a biological tinge because it assumes that development is the result of a biological maturation process enriched with cultural influences. Its main assumption is the recognition that the essence of mental development is reconstruction and reintegration. According to this theory, a child's cognitive schemas are its independent construction, resulting from constant exploration. In order to learn about objects, phenomena, and specimens, a child must have direct, active contact with them and thus learns and transforms them.

From this it can be seen that knowledge is a personal construction of a person and is created in interaction with the social environment. Thus, the child does not passively absorb knowledge from the environment, but constructs it, creates it by interacting with the social environment. Two processes play an important role in the construction of knowledge by a child: assimilation and accommodation. Assimilation is the process of incorporating new knowledge into existing cognitive schemas. Sometimes, however, it happens that new knowledge or information cannot be incorporated into existing cognitive structures. This makes the second process of accommodation work. Thanks to accommodation, previously acquired cognitive schemas are transformed in such a way that it is possible to incorporate new knowledge into the structures of knowledge already possessed.

Jean Piaget also draws attention to the fact that a child creates his knowledge about closer and further reality not only through personal experiences, but also using cultural tools such as words, speech, language, sign. During active interaction with the social environment, the child constructs three types of knowledge, namely: physical knowledge, logical-mathematical knowledge, and social knowledge.

A child creates physical knowledge when he performs activities and actions on objects and observes the effects of his actions. Logical thinking and drawing conclusions from observation and actions on objects play an important role in constructing physical knowledge. On the other hand, logical and mathematical knowledge is constructed when the child thinks about activities and actions performed on objects. Thus, this knowledge arises in the course of the child's mental activity, and activities and actions on objects mediate its construction. On the other hand, a child creates social knowledge when it interacts with adults and with peers, when it communicates with people. It follows that an important role in constructing knowledge is played by the child's actions "on" and "with" objects, as well as relationships and in-



→ teraction with adults and peers. The child's relationship with the teacher is especially valuable, and should be based on cooperation and mutual respect. This is important because the teacher triggers the child's multifaceted activity, thanks to which the child will interact with peers to undertake exploratory and experimental activities. In addition, social interactions with peers teach the child to evaluate their own way of thinking, acting and understanding the world, understand other people, and stimulate reflection, reflecting on their own and colleagues' actions. Therefore, while respecting the assumptions of Jean Piaget's theory in preschool education, the teacher must understand how the child constructs physical, logical-mathematical and social knowledge. It is also important that in this process the teacher triggers the child's multifaceted activity and plays the role of a facilitator, i.e. a person who makes it easier for the child to accumulate experiences and construct knowledge about closer and more distant reality. It is especially important for the teacher to help the child interact with peers in society, as they stimulate his cognitive development and provoke *'evaluation of his own concepts as part of the process of accommodating to other people's views'* (Piaget, 1997; Piaget, 1966).

The American psychologist Jerome Bruner (1915–2016), together with David Wood, developed a concept called scaffolding, which he based on three ways of exploring the world, i.e. enactive, iconic and symbolic representation.

Enactive representations refer to perceptive-motor activities and are characterized by the fact that various events are classified by the child in the category of activities and actions that lead to them. It should be emphasized that enactive representations do not constitute a direct copy of the action, but retain its character, because the child performs pretend activities while maintaining the order in which they are performed. For example, a child in a thematic game of a shop, playing the role of a seller, performs pretend activities, maintaining their actual sequence (for example, asking what

the customer is going to buy, showing the goods and describing its advantages, packing the goods, deleting the money, spending the rest and saying goodbye to the customer, wishing you are satisfied with the purchased goods). On the other hand, iconic representations appear in the form of pictorial counterparts of things and phenomena, stylized images, resembling those objects, which are represented, for example, by a sign saying that smoking is prohibited, or a luggage storage sign. On the other hand, symbolic representations in language, with verbal signs, reflect the child's experiences through concepts. Development causes the child to change the way of presenting the world into a different one.

Building scaffolding is a concept directly related to the zone of the closest development of Lev Vygotsky, because it enables the child to perform tasks at a higher level. In order for the child to do the job well, it must be supported by an adult. Thanks to the support and help of an adult, a child achieves goals that it would not be able to achieve on its own. This support of an adult is needed by a child not only because of their inferior learning, but also because of the beginning of the process of development of a given mental function. Therefore, at the beginning, the adult systematically helps the child overcome obstacles, intervenes more often and helps to build the scaffolding, and then gradually withdraws his support, when he realizes that the child is able to complete the task on his own and overcome the difficulties that appear on the way to achieving the goal. Thanks to this, the child engages in more complex activities, in which, with the support of an adult, mental functions and processes appear that are just developing. As a result, at the end of this process, the child progresses in learning and begins to build the scaffolding itself, trying to imitate the adult while performing tasks and taking into account the advice and guidance obtained earlier. Building scaffolding is also related to triggering an effective surprise in a child by creating educational situations that involve them in combinatorial activity, thanks to

which they create new structures from known elements, look for new solutions, reflect, draw conclusions, which they then use to solve other tasks and undertake new challenges. It is a challenge for the child related to the construction of knowledge, mainly procedural knowledge ('I know how').

Jerome Bruner, like other representatives of constructivism, believes that the construction of knowledge by a child is always done in the social environment by interacting with adults and peers. Thanks to this, the child learns and understands the closer and further reality, and the knowledge gained thanks to his own activity is not only permanent, but becomes a value for a few-year-old that he can defend and convince others to.

Jerome Bruner also draws attention to the fact that the mental development of a child depends on external influences and begins when the child goes back in his own footsteps to, with the support and help of the teacher, encode in a new form the knowledge he has acquired before, and then use it. It to transform and change closer and more distant reality.

The educational implication of Jerome Bruner's concept is focusing on the child and providing him/her with quantitative and qualitative changes in his development, and the development of those mental functions that enable a young child to fulfill certain social roles and fulfill them reliably. It will also enable the child to develop special abilities (multiple intelligences), thanks to which it will interact with the social environment, satisfy its curiosity about the world and will be able to function cognitively at a high level.

3. Constructivist approach in preschool education

Constructivism is an approach to education, it is a theory of learning that assumes that knowledge is an individual construction of the human mind that arises 'a dynamic process of giving personal meaning and understanding the constantly changing reality' (Gołębniak, 2005)

In the constructivist approach, four basic theses can be distinguished. Here they are (Nowicka, 2012):

- *Knowledge cannot be passed on, it does not consist in transmission from one man to another, but it is created through personal actions, subject to constant critical verification.*
- *Colloquial terms play a fundamental role in the development of scientific concepts.*
- *During cognitive activity and learning it does not occur reflecting reality in the mind, but building its constructs.*
- *Images of reality are always created in the context of a specific culture, however, they remain highly context-specific individual's biographical and cognitive.*

According to the assumptions of constructivism, every person, including preschool children, independently comes to knowledge through their own research activities subject to constant critical verification. The teacher's task is to introduce the child to such educational situations, in which he has the opportunity to independently come to knowledge, acting "on" and "with" objects and interacting with the social environment. This applies to the child's acquisition of knowledge about the social, natural, cultural and technical environment. Pre-school education referring to the idea of constructivism must meet certain conditions. They are presented in table 1.

Research activity is manifested in the fact that the child more often than his peers undertakes exploratory activities of high intensity in order to learn new objects, compare them with others and on this basis determine how they differ from previously learned objects. The child's internal motivation stimulates research activity, which is an impulse to consciously perform specific activities aimed at achieving the set goal. It occurs when the child realizes the essence of his desires, sets the goal of the action and becomes aware of the situation, and determines the path leading to the achievement of the previously set goal.

New stimuli, which are unknown objects, phe-



→ **Table 1 » Model of constructivist preschool education**

Elements of the constructivist preschool education model	Conditions enabling a child to independently construct knowledge about the world
Research activity of the child.	Learning through direct contact, exploratory activities, experience, as well as through viewing, exploring, breaking down into elements, experimenting, looking for answers to the questions: What for? Why? How?
Interactions of the child with the social environment. The teacher with the children.	Co-creating knowledge about closer and more distant reality in the teacher — child, child — child relationships, as well as through work in small teams and substantive dialogue between the teacher and children.
Problem situations causing a cognitive conflict in a child.	Formulating problems and searching for the best strategy to solve them.
Referring to knowledge previously acquired while creating new knowledge.	Formulation and verification of hypotheses
Perception by the child of the mistakes made during self-inquiry.	Repeating the research process many times.
Emphasizing the process of reaching knowledge, not the result.	Creating situations in which children analyze their research activities, interpret them, evaluate and classify them. Analyzing the way to achieve the goal.

nomena, objects and specimens, also stimulate the child to research activity. The child wants to get to know them, satisfy their cognitive curiosity and therefore undertakes exploratory activities. The scope of the child's exploratory activities includes manipulative and sensory activities, as well as verbal activities in the form of asking questions, statements and comments. Verbal activities at the end of preschool age take the form of hypotheses, which is related to going beyond the currently perceived situation. Through research activity, the child acquires material to create ideas and concepts and prepares to solve problems.

The child's research activity is a self-discovery of knowledge about closer and further reality. The child sets the pace and time of work for himself, learns through trial and error, and therefore has to overcome many difficulties to reach the goal. Research activity may also take place with the participation of a teacher who initiates situations, provokes the child to ask questions, provides appropriate didactic resources, directs the activities

of a few-year-old child during research, experimentation and observation.

The child's interactions with the social environment include the teacher-child and child-child relationships. Thanks to these relations, in accordance with the assumptions of constructivism, the child's knowledge is created. It is social knowledge that arises when a child interacts socially with adults and peers when communicating with people. An important role in creating social knowledge is played by the child's relations and interaction with peers and adults, when he acts "on" and "with" objects. The child's relationship with the teacher is especially valuable, and should be based on cooperation and mutual respect. This is important because the teacher triggers the child's multifaceted activity, thanks to which the child will interact with peers to undertake exploratory, experimental and observational activities. In addition, social interactions with peers teach the child to assess his own way of thinking, acting, acting, understanding the surrounding reality, to under-

stand the behavior and behavior of other people, and also force him to reflect, reflect on his own actions in relation to peers, adults and the surrounding reality. The teacher's pedagogical activities should be aimed at encouraging the child to work in teams, to solve problems together with peers. The substantive dialogue between the teacher and the children is also important, thanks to which several-year-olds not only organize, clarify and enrich their knowledge, but also discover new areas for independent acquisition.

Lubomirska (2010) says that interactions with the social environment will be of educational value when they lead to the construction of knowledge by the child, when there is intellectual cooperation, understanding, and establishing a common strategy between the teacher and the children and between the children themselves. Actions leading to the solution of specific problems. An important role in constructivist preschool education is played by putting the child in problematic situations that cause him/her cognitive conflict, also known as cognitive dissonance (Klus-Stańska, 2006, p. 19)

Cognitive conflict is an unpleasant mental tension that occurs when there are discrepancies, contradictions between the knowledge previously acquired by the child and new information flowing to him from various sources of information. It causes a general mobilization in the individual to undertake actions aimed at modifying knowledge and eliminating its elements that are in contradiction with each other. Therefore, it is advisable to introduce the child to problem situations in which he will be able to formulate problems and develop strategies to solve them. Koziński (2018) believes that problem solving will contribute to discovering those fragments of reality that the individual has not yet known and will develop mental structures in them. Putting a preschool child in problematic situations creates real opportunities to reduce the cognitive conflict by (Klus-Stańska, Szczepka-Pustkowska, 2009, p. 463):

- changing one of the elements that are in conflict with each other,

- reformulation of the meaning of one of the incompatible elements,
- adding a new cognitive element, the task of which is to eliminate the contradiction between the existing elements.

From this it can be seen that the cognitive conflict is educating for the child, as it is an impulse stimulating a young child to act, which manifests itself in formulating problems and searching for the best strategies to solve them.

Creating new knowledge is related to referring to knowledge acquired earlier. Constructivism assumes that you need to appreciate the knowledge you already have, because it is the basis for creating new knowledge. When absorbing new content, new information, every person, and therefore also a preschool child, relates it to the previously acquired knowledge on a given topic. Based on it, the child formulates hypotheses and then verifies them.

Piaget (1966) emphasizes that in the process of creating new knowledge, a child uses previously formed cognitive patterns, i.e. patterns of behavior that he uses in various situations. The previously mastered cognitive schemas are disturbed and thus make it impossible to solve a specific research problem and come to new knowledge on one's own. Therefore, the child feels bad, has mental discomfort, and this makes him adapt his cognitive structures to the new situation and, consequently, creates a new cognitive schema that allows him to achieve the goal. From this it can be seen that the creation of a new cognitive schema is a development factor as it contributes to the restructuring of the child's experience.

From this it can be seen that before the child acquires new knowledge about the closer and further natural, social, cultural and technical reality, he is in a state of balance, cognitive harmony. A child's contact with a new object, object or phenomenon causes a disturbance of cognitive harmony. Then the processes of assimilation and accommodation start, and thanks to this, cognitive harmony is restored.



→ For example, a child has the concept of a dog shaped. He knows that the dog is large or an animal that has four legs, fur, tail, mouth, and barks. While on a trip to the zoo, a child sees a tiger for the first time in his life. He tries to include this animal in the previously formed concept of a dog, and thus assimilates the tiger into the dog's scheme. It fails because the tiger's size, appearance and voices do not fit the previously formed concept. This causes the child to ask questions to adults who inform them that it is a tiger – a yellow-rusty animal with black stripes, much larger than a dog that does not bark but roars, has large and sharp fangs, strong claws, hunting other animals and feeding on them. Adults explain to their child the differences between a dog and a tiger, and pay attention to the common features of four legs, a tail, a body and a muzzle. Receiving new information from adults, the child creates a new concept, which is the tiger, thus adapting its cognitive structures to the new situation and, consequently, creates a new concept and cognitive structure.

In constructivism, the key to creating new knowledge is that the child notices the mistakes made, analyzes them and eliminates them. Michalak (2005) says that *'errors and misconceptions in a subjective sense are not them, but only valuable development material for every researcher'*. Therefore, the teacher should consent to the mistakes made by children in constructing new knowledge, and also encourage them to make many attempts, help to notice and eliminate mistakes. This is important because the children are then provided with mental comfort, because the teacher does not discipline them, is not angry, and does not express his dissatisfaction with making wrong decisions. Thanks to this, children independently reconstruct their own ideas and, as a result, achieve the set goal.

Emphasizing the process of reaching knowledge, not the result, is extremely important in constructivist preschool education. The result of an action, i.e. the acquisition of a specific knowledge resource, is less important than the process of find-

ing it. The emphasis on the process of reaching knowledge leads to the development of intellectual independence in the child.

Nowicka (2012) writes that *'children should build their knowledge through their own independent activities, during which they analyze, evaluate, classify, interpret, and synthesize other mental operations. The final effect in the form of a specific amount of knowledge and measurable achievements of the child is not so important here'*.

The teacher, as already mentioned, should introduce children to educational situations in which they have the opportunity to construct new knowledge by acting "on" and "with" objects, interacting with the social environment. A constructivist approach to the educational and didactic process in kindergarten emphasizes the following issues:

- the child's knowledge arises as a result of his own activity, is constructed, created in his mind,
- the acquisition and construction of knowledge by a child always takes place in interaction with the social environment,
- when constructing knowledge, the child must act "on" and "with" objects,
- the child's knowledge is not only the knowledge of concepts, facts and information about the world, but also the ability to use them in various situations in preschool and everyday life,
- knowledge is not given once and for all, but changes with the child's development, with scientific and technical progress and with socio-cultural changes,
- knowledge is the result of the child's actions in the social space, and the teacher is the organizer of the educational environment, guide, guardian, master,
- effective pre-school education is one that enables children to discover knowledge on their own.

In the constructivist approach, the teacher and the child play a specific role. This is presented in Table 2.

Table 2 » *The role of the teacher and the child in the constructivist approach*

Teacher	Child
Causing a cognitive conflict. Diagnosing the zone of the nearest development. Organizing different contexts. Performing evaluation.	Internal motivation. Disclosing experiences. Assimilation and accommodation of knowledge. Knowledge application. Reflection.

4. Difficulties related to the use of the constructivist approach in preschool education

The use of the constructivist approach in preschool education is not at all easy. This is due to the fact that pre-school education is dominated by the behavioral approach expressed through cultural transmission. As a result, children are not always given a chance to undertake research activities on their own, and all attention is focused on the fact that the activities of a young child are a reaction to the teacher's activities and follow a specific pattern. The child's activities are controlled and strengthened by the teacher. These can be positive reinforcements that inform the child that the activity is performed well and correctly. On the other hand, negative reinforcements inform about an incorrectly performed activity by the child and therefore must eliminate it from its catalog of activities. Moreover, in the behavioral approach, the educational and didactic process in kindergarten is adjusted to the average cognitive potential in a given group of children. This means that the principle of taking into account the child's individual line of development is not respected.

Difficulties related to the use of the constructivist approach in preschool education are also caused by the teacher's lack of understanding of the need to improve and optimize the educational and didactic process. It is related to the lack of the ability to create educational conditions and situations in which children will be able to carry out research activities and independently create and

construct new knowledge. In order to initiate children's research activities, the teacher must skillfully formulate the problem. Experience shows, however, that teachers find it difficult to put a problem to a specific task correctly. Children, on the other hand, have difficulty making hypotheses. Therefore, the teacher should encourage several-year-olds to pose hypotheses through appropriate questions. These could be questions such as, for example, "What do you think when we use less water when showering in the bathroom?" "What do you think will happen when we put a bottle of water in the freezer?" "Why does steam come out of the kettle once and not another time?"

Klus-Stańska (2010) says that *'teaching should be based on the independent use of the scientific method by which the student himself has to initiate the processes of cognition'*. This also applies to preschool children and therefore the teacher should remember that the order of tasks proposed to children should take into account the most important activities provided for in research procedures presenting the problem, formulating hypotheses and their verification through experience and research activities, formulating conclusions and confronting them with scientific knowledge.

In preschool education, it is necessary to deviate from the behavioral approach and move towards constructivism. This will happen when the teacher understands that:

- a child cannot be treated as an inactive individual, or even passive,
- the process of acquiring knowledge by a child in categories: stimulus – reaction,



- • it is not advisable to give children ready-made rules and methods solutions to a specific task,
- it is not advisable to provide children with only ready-made knowledge about something closer and further reality,
- it is impossible to process educational and didactic in kindergarten adjust to the average cognitive potential in a given group of children, because few-year-olds with special needs will disappear from sight educational and having special abilities.

If the teacher understands this, his role will change from a person transferring ready knowledge to a person organizing educational situations in which children have the opportunity to undertake cognitive activities. In the constructivist approach, the teacher also nurtures and strengthens the child's cognitive curiosity, encourages them to present their own ideas, to dialogue and to present their own opinion.

In the constructivist approach, the child himself or with the help of the teacher must discover or develop his own way of solving the task, find a new algorithm of effective action. This enables the child to be creative and engage in the process of self-inquiry. The teacher's task is also to create conditions for several-year-olds to conduct exploratory activities, research activities, experiments and observations

5. Conclusion

Referring to the idea of constructivism in preschool education, the child's need to acquire knowledge about the world is respected, as well as to change and transform the reality in which he lives and functions, and to enter into social interactions with peers and adults. Thanks to this, the teacher's pedagogical activities are directed at the child, its development, needs, aspirations and creative possibilities. At the same time, the child's multifaceted activity is released, the property of which is not only to explore the world, search for non-standard solutions and understand previous experiences. It is also an activity '*leaving freedom in making attempts, wandering in the dark and taking into account the possibility of making mistakes*' (Piaget, 1997, p. 81).

A constructivist approach to preschool education emphasizes the child's activity in acquiring knowledge. He emphasizes that gaining knowledge is a process that takes place in constant integration with the social environment and in confrontation with oneself, which in turn leads to the reconstruction of the image of one's own world. Hence, a constructivist approach to preschool education is an important signpost for the teacher, pointing to the triggering of multilateral activity of a young child and directing it so that it makes sense for him and gives him the opportunity to collect new experiences and create new knowledge in interaction with the social environment.

REFERENCES

- [1] BALICKI, B. et al.: *Radykalny konstruktivism. Antologia*. Wrocław: Wydawnictwo "Gajt", 2010.
- [2] BRUNER, J.: *Kultura edukacji*. Kraków: Oficyna Wydawnicza "Impuls", 2006.
- [3] GOŁĘBNIAK, D. B.: Konstruktivism — moda, "nowa religia" czy tylko interesująca perspektywa poznawcza i dydaktyczna? *Problemy Wczesnej Edukacji*, 2005, 1.
- [4] KLUS-STĄSKA, D.: Behawiorystyczne źródła myślenia o nauczaniu, czyli siedem grzechów głównych wczesnej edukacji. In *Wczesna edukacja. Między schematem a poszukiwaniem nowych ujęć teoretyczno-badawczych*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne, 2006.
- [5] KLUS-STĄSKA, D.: *Dydaktyka wobec wyzwań chaosu pojęć i zdarzeń*. Warszawa: PWN, 2010.
- [6] KLUS-STĄSKA, D., SZCZEPKA-PUSTKOWSKA, M.: *Pedagogika wczesnoszkolna — dyskursy, problemy rozwiązywania*. Warszawa: Wydawnictwa Akademickie i Profesjonalne, 2009.

- [7] KOZIELECKI, J.: *Psychologiczne koncepcje człowieka*. Warszawa: Wydawnictwo “Żak”, 2018
- [8] LUBOMIRSKA, K.: Pedagogika interaktywna i konstruktywistyczna – teoria i praktyka. In *Pedagogika małego dziecka. Wybrane zagadnienia*. Warszawa: Instytut Badań Edukacyjnych, 2010.
- [9] MICHALAK, R.: Konstruktywistyczna perspektywa założonego modelu edukacji elementarnej. In *Edukacja elementarna. Podstawy teoretyczne – wybrane zagadnienia*. Warszawa: Centralny Ośrodek Doskonalenia Nauczycieli, 2005
- [10] MICHALAK, R., MISIORNA, E.: Nauczyciel i uczeń w zmieniającej się szkole. In *Renesans nauczania całościowego. Współczesna dydaktyka wobec nauczania zintegrowanego, blokowego i przedmiotowego*. Warszawa: Wydawnictwo Akademickie “Żak”, 2003.
- [11] NOWICKA, M.: Konstruktywizm jako wyzwanie w praktycznym przygotowaniu studentów do zawodu nauczycielskiego. *Praktyki pedagogiczne ważnym ogniwem w procesie kształcenia nauczycieli edukacji wczesnoszkolnej i przedszkolnej*. Włocławek: Wydawnictwo “Expol”, 2012.
- [12] PIAGET, J.: *Dokąd zmierza edukacja?* Warszawa: WSiP, 1997.
- [13] PIAGET, J.: *Studia z psychologii dziecka*. Warszawa: PWN, 1966.
- [14] SEMADENI, Z.: *Podejście konstruktywistyczne do matematycznej edukacji wczesnoszkolnej*. Warszawa: Ośrodek Rozwoju Edukacji, 2016.
- [15] WADSWORTH, B. J.: *Teoria Piageta. Poznawczy i emocjonalny rozwój dziecka*. Warszawa: WSiP, 1998.
- [16] WYGOTSKI, L.: *Narzędzie i znak w rozwoju dziecka*, Warszawa: PWN, 2006.
- [17] WYGOTSKI, L.: *Wybrane prace psychologiczne*. Warszawa: PWN, 1971.
- [18] ŻUCHELKOWSKA, K.: *Edukacja matematyczna w przedszkolu*. Toruń: Wydawnictwo Edukacyjne “Akapit”, 2019.

Constructivism as an interesting perspective in preschool education

ABSTRACT

Pre-school children not only acquire ready-made knowledge about the world from various sources of information, but also seek it, create it, construct it by interacting with the social environment. Therefore, it is advisable to include the constructivist approach in preschool education. The article shows that the constructivist approach is not only a refreshing change, but also an interesting perspective and challenge for preschool education.

KEYWORDS

Constructivism; constructivist approach; preschool education

JEL CLASSIFICATION

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Diplomas on Blockchain — Proposal for Permission less Process Design in a European Educational Area¹

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* 1. Introduction

Educational diplomas are a tangible proof of the obtained knowledge for any type of students. The importance of diplomas is widespread and valid throughout one's life, mostly in relation to job seeking and job application in fields, where the quality of education is a relevant factor in the success on the job market. In recent years, we have experienced cases in which these diplomas have been forged and therefore their value compromised. It is estimated that 6% of Bachelor's degree are falsely claimed (Attewell and Domina, 2011).

This leads us to the re-evaluation of the process design in terms of educational diplomas issuing, registering, verifying and revoking. It is believed that The solution should be found in an integrated, digital system at least on the level of European single market from which all its stakeholders (accreditors, universities, graduates, employers and governments) could benefit (Dumčius et al., 2017).

At this moment, most of the research related to diploma authenticity is based on the blockchain technology, as it can securely store not only cryptocurrency tokens, but also smart contracts and

digital signatures and certificates in a public database (Vaughan, Bukowski and Wilkinson, 2020; Karasavvas, 2018; Chen et al., 2018). In addition to the current research, Bitcoin, first blockchain application, proving us that this technology is flawlessly functional with daily average of 8 million sent transaction, growing market value and auditable 12 years long history with self-sovereign, immutable, transparent and permissionless approach (Yaga et al., 2018).

The goal of this paper is to design proposal for digitalization of educational diplomas management on European single market that contains certificates issuance and accreditation issuance. The proposed solution should be effectively deployed on a permissionless public blockchain platform without controlling infrastructure by European Union authorities, while meeting all the process requirements as revocation mechanism of diplomas and certifications for educational programs is. The public open-source design is preferable due to the permanency of credentials that are not dependent on infrastructure of verifiers or issuers and instead are in control of the owners of credentials (graduates) for lifetime. For this reason, European au-

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thorities should take part in the process only as a facilitators, not the gatekeepers of the system. The proposed process design was also tested for the stability and future scalability because it is dependent on the external infrastructure of Bitcoin network.

2. Current state: educational diplomas issuing and verification process

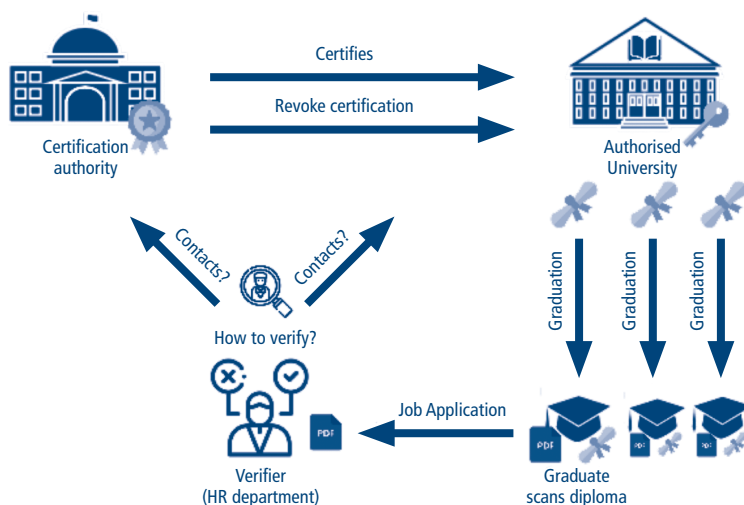
First and foremost, in order to be certified to provide formal education, institutions must obtain accreditation. The original accreditation in European Higher Education Area is based on The Bologna Declaration signed by 27 ministers of Education in 1999. Only those accredited institutions are then recognized to issue a valid diploma as a proof of study completion. Accreditation is provided by government bodies such as Ministry of Education or other specialized organizations on the international level, such as European Foundation for Management Development. These bodies are responsible also for the subsequent monitoring of the provided accreditation and are able to revoke it, if the quality requirements of educational programs

provided by the institutions are no longer met (EC, 2018).

Diploma, a proof of completed study at an accredited higher educational institution, is commonly issued as a paper document and is handed personally to the graduate during graduation ceremony. This physical document is most of the time only official proof given from the institution to the graduate to certify the completion of studies. Based on European Tertiary Education Register is in the European Union 17 653 European Higher Education Institutions that can issue these official diplomas (ETER, 2020).

At various occasions (applying for further studies, job seeking) the graduate is asked to provide a proof of his education to the requesting party. The graduate always keeps the original diploma; therefore, a notarized copy of the diploma needs to be issued and handed to the requesting party. Additionally, if the diploma is issued in an unrecognized language by the requesting party, official translation needs to be provided. The notary, when issuing the notarized copy, only validates that the copy is identical with the original document. The verification process becomes weak in its design al-

Figure 1 » Current process of diplomas verification



Source: Authors

ready at this point, as no check for the originality of the diploma itself occurs. The notary doesn't check if the diploma has been issued by the educational institution stated on the document and/or if the educational institution has an appropriate accreditation to issue diplomas in the mentioned field of study. These realities are not required to check in any further point of verification. This is an identified process gap that is to be addressed in the proposal of the new process establishment.

2.1 Why do we need solid verification process – case of forged diplomas

The gaps in the current process provide ground for forgery of educational diplomas. There are reported cases worldwide on the falsification of paper certificates as such. To mention a few, in years 2013 and 2014, at least 3000 citizens purchased fake educational diplomas from international company Axt in the United Kingdom. The prices of these diplomas were as high as £500,000. These diplomas were purchased by multiple entities, such as government consultants, nurses or large defense contractors (BBC Radio 4, 2018). Another example is from Kuwait, where forged diplomas were identified on multiple occasions in the last five years and it was uncovered that approximately 1 000 diplomas were counterfeit and sold to citizens, ministry officers and army officers (Saudi Gazzete, 2020).

Students are not the only ones engaging in forgery as fraud occurs also on the side of the issuing institutions. It is a common practice to provide education (e.g. language studies) on behalf of an original accredited institution by a partner institution. Upon study completion, the partner institution requests the diploma from the accredited institution on behalf of the students. There are a documented cases in which the partner institution's employee responsible for requesting the diplomas to the accredited institution issued the diplomas on their own. As the diplomas were paid for by the students, the employee would collect the

fees, but never paid the accredited institution. The students were unaware of the false diplomas and the issue was uncovered for several years until one of the students was informed of the invalidity of their issued diploma by their employer. The employer took a proactive approach in verifying the diploma's validity by directly contacting the accredited institution that confirmed forgery (Barák, 2016).

These cases are only documenting the uncovered situations in which forgery of diplomas was involved. However, as there is still no existing verification process of the diplomas' validity, there is no certainty in saying how many of these cases occur nowadays, but it is estimated that 6% of Bachelor's degree are falsely claimed (Attewell and Domina, 2011). If we would compare these numbers to European Higher Education Area where is almost 36 million of current students, the potential number of forged diplomas just for new graduates would be more than 2 million (EC, 2018).

3. Possible solution: shared national registries of diplomas

As a possible solution to the problem of educational diplomas verification would be to establish a shared registry of all the diplomas issued by educational institutions in a country. This registry could be managed on the state level, such as the already existing shared registries of land, vehicles, asylum seekers and others.

3.1 Limitations of the national registries

Maintaining a national registry of educational diplomas solves the problem on the intrastate level. However, people tend to study in multiple countries and consequently move within European Union for job opportunities supported by the free movement of labor within the European single market. Given this trend of integration across European Union, if each of the Member States would maintain and own registry on the national level,

there would still be a gap to cover on the international level. Different set ups of registries by each Member State would make it challenging for information sharing, posing difficulties in speed and scalability of the verification process. Looking at the global scale, it would be even more challenging for institutions outside of European Union to seek and verify information if there would be only national registries established.

Based on the above it is suggested that a common registry of educational diplomas on the European Union level is established (Dumčius et al., 2017). Naturally, it would be even more favorable if such a registry is established on global level, however it is too challenging to seek a global consensus. The challenges would probably not rise only from the disagreements over the technological design of such a registry, but mostly from other political and societal disputes, for example over the governance of such registry.

3.2 Registry on the EU level – who governs it?

If a shared registry on European Union level is to be established, there is a need for one body to govern it. As this registry would be concentrated in hands of one party, there are risks associated with the problem of single point of failure. In this problem, the institution would have sole power over the information in the registry, which poses risks of unjustified information tampering. This could be a result of a human error as well as technical issue. Hence, there is a need of a strong governance mechanism preventing such failure from occurring (Grech and Camilleri Anthony, 2017).

Additionally, if such a registry is established in a specific Member State, there might be some socio-economic impacts on the EU countries, such as problems of trust (one nation governing over the information of all EU citizens), questions over employment advantages (institution establishment would bring employment within the region) or concerns over competitive advantage (prestige of

having such an institution established in a specific country).

3.3 The solution is in technology – blockchain

As of 3rd January 2009, with Bitcoin coming into existence (Nakamoto, 2009), shared digital and immutable bookkeeping technology emerged. This new type of technological governance based on the idea of distributed and tamper resistant database, later commonly recognized as blockchain, made it possible to transfer unique digital information that cannot be multiplied or changed. This application brought the notion of autonomous valuable assets transfers in digital space, which would normally be supervised by a trusted third party. Bitcoin, the first application of blockchain, is used for the transfer of payments in digital interface (Nakamoto, 2008). Bitcoin is a proof of concept of blockchain and since then, other use cases have been explored to be deployed and governed by this disruptive decentralized technology.

If we seek to establish a trusted governance mechanism open for verification to public without a single point of failure, there are certain ideas to be followed. Such a registry should therefore have an infrastructure that is not only safe to use, but also neutral towards its participants who are equal in terms of power of governance towards the information stored. Blockchain infrastructure offers this type of establishment and ensures that bad actors can't tamper with the records.

From technological perspective, shared registry on blockchain technology could be either launched on an existing infrastructure (Bitcoin or another cryptocurrency's underlying technology), or have an own infrastructure created for this purpose as Hyperledger Fabric, Corda or Enterprise Ethereum is (Bear and Rauchs, 2020). These two approaches differ in the level of permission access that participants possess on the network by default.



→ 3.4 Public permissionless blockchain – design

Bitcoin is an example of a public permissionless blockchain. This infrastructure is open source, which means that anyone is able to maintain it by proposing changes, secure it (by so called mining), use it or view and search in the transaction history of its records. The more an infrastructure is decentralized, the harder it is to make any changes in the information registered in it or to tamper with its design. Bitcoin has currently at least 25 million users (Lielacher, 2020) and more than 40 thousand full-node clients that secure the Bitcoin infrastructure (Bitcoin Node Software, 2020). This architecture is a proof of the technology's immutability and tamper resistance. Its popularity of use is supported by Bitcoin's market value as well as the daily average of 1 billion USD worth of transactions on the network (BitInfoCharts, 2020).

Permissionless blockchain design is ideal for solving a problem of maintaining a shared registry of information which is open to participate, view and supply data. There is no single entity governing the network, which eliminates the issue of single point of failure. This establishment is also politically neutral to all participants. With all these characteristics, permissionless blockchain appears to be the right infrastructure for the international registry of education diplomas.

3.5 Public permissionless blockchain – review of use cases

The proposed design for diplomas on Bitcoin blockchain (see below) is only theoretical, other similar applications should be mentioned to demonstrate the possibility to transfer the idea into practice. Microsoft, together with Decentralized Identity Foundations, is testing a public beta version of Identity Overlay Network (ION) which runs atop the Bitcoin blockchain. This application provides self-owned and tamper resistant proof of identity to its users (Dingle, 2020). Another exam-

ple related to Bitcoin blockchain is the author's diploma thesis. On the day of submission of the thesis, author hashed the PDF file of the thesis and sent a transaction with it into the Bitcoin network. Unique hash, that is like a fingerprint of the thesis is recorded in Bitcoin, which serves as a proof of thesis existence on the date of submission (Valík, 2018).

But probably most complex example of diplomas registry on a blockchain is Blockcerts – an open standard solution originally developed in MIT Media Lab and aligned with Open Badges standards (Blockcerts, 2020). This solution is free to use and can be deployed on several types of permissionless blockchain infrastructures but Bitcoin and Ethereum are mostly cited in the Blockcerts community (BF, 2020).

The closest application to the proposed design of the shared registries of this paper is the method developed by University of Nicosia that uses Bitcoin blockchain to register the metadata of its graduates since 2015. This approach originally follows the Blockcerts open standard, but differ in a several attributes, for example that it is not necessary to hold any credentials or special application by graduates. Only the PDF copy that maintain all necessary information is handed to the graduate by the educational institution. Also, it is using Bitcoin blockchain only as the censorship-resistance of rest of the blockchains is disputable. For example in Ethereum short history the transactions were already reversed, thus the data were censored (Mehar et al., 2019).

As of 2018, the experts in the University of Nicosia took the process even further by introducing a possibility to revoke and amend information registered in this database, despite the tamper-resistant and immutable nature of Bitcoin blockchain itself. This method was developed without compromising the decentralization philosophy of consensus seeking of blockchain (Karasavvas, 2018). Issuing diplomas in this paper is proposed with same logic, but Certification authorities were added for united implementation on European level.

3.6 Process design: issuing and verifying diplomas on a public permissionless blockchain

Governance of diplomas on permissionless blockchain could be proposed for many public blockchains, but Bitcoin blockchain was chosen as it has a proven history, it is the most secure in terms of its hashrate and is, ideologically, the most trusted one across the industry, thus it has the highest probability of mass acceptance by the community (Blandin et al., 2020). It should be noted, that these benefits of Bitcoin are balanced with higher rigidity of its blockchain. For example, Ethereum – specialized mostly on the smart contract registrations, would be probably an easier blockchain technology to leverage for the implementation of the solution.

The proposed solution allows an easy access for any verifiers to prove validity of issued diploma. Even though the solution is described technically, it is important to remember that blockchain is merely the underlying architecture of the solution and the manner in which the user integrates with the platform is no different than any other digital interaction for regular users. The verifiers would be using a public web-based interface in which the PDF of diplomas would be uploaded from their devices and automatically compared with credentials previously recorded in the blockchain. The platform could also integrate a registration process for those institutions that wish to issue and record their certificates with the technology.

The certificates and diplomas can be issued and registered in the familiar PDF format. The reason for this choice is that this format is widely adopted by a significant user base and is supported by the majority of operation systems. It is important to notice, that the verification process as such is not structured to be in control by the issuer of the diploma, also it is not necessary to be in possession of the European Union institutions. As the suggested platform is open source, anybody can run its own verification interface to verify any diploma re-

corded on the platform. Therefore, no direct interaction among the verifier and the issuer needs to occur. Technologically, the most challenging concept in this design is the action of revoking the credentials of a diploma once registered in the blockchain. A need for revoking can arise as a result of a mistakenly issued diploma, in the case of the diploma validity expiration or as a result of reconsideration of one's legitimacy of earning the diploma in the first place.

3.6.1 The process of issuing diplomas on Bitcoin blockchain

1. *Adding credentials metadata:* The issuer (an accredited institution) issues a diploma in the paper format, as per the usual process. In addition, this diploma is saved digitally into a PDF file. Specific credentials (metadata) are added into the document's data structure that are recognized on the machine reading level. These metadata entail information about the issuer, a Bitcoin address that will be used for the publishing and supporting data such as the graduate's identity and possibly also educational results.
2. *Calculating merkle root:* Diplomas in the PDF format (already augmented with metadata), if issued together with others at the same time (for a class of graduates) are then hashed together, using merkle tree structure to generate a merkle root (Merkle, 1982). A hash is as short alphanumeric fixed-length reference to a specific diploma. Putting the hashes of a group of diplomas together and hashing them further following the merkle tree structure until the hashing of the group is complete and the final hash is created in the form of the merkle root – one hash of all the diplomas issued at once.
3. *Issuing on the blockchain:* Every Bitcoin transaction has a script OP_RETURN that can be used when sending transaction. If OP_RETURN is used, arbitrary data can be stored in a transaction, therefore in the blockchain. To store credentials of diplomas, the issuer sends Bitcoin →

- transaction from their address with OP_RETURN script included followed by the merkle root. With this transaction being recorded on blockchain, the proof of the diploma's validity is recorded as well. The issuer is provided with a TxID — a unique identifier of this transaction.
4. *Adding blockchain proof metadata to diplomas:* The proof of the diplomas being recorded in the blockchain is to be further included in metadata of the PDF diplomas, following the same process as in step 1 of this scheme. Each file needs to be augmented by TxID and so called merkle proof (an indication of the location of the diploma's hash among other diplomas' hashes in the merkle root).
 5. *Graduation ceremony:* The paper diploma as well as the PDF file with the added metadata can be handed over to the graduates as the complete physical and digital proof of their graduation.

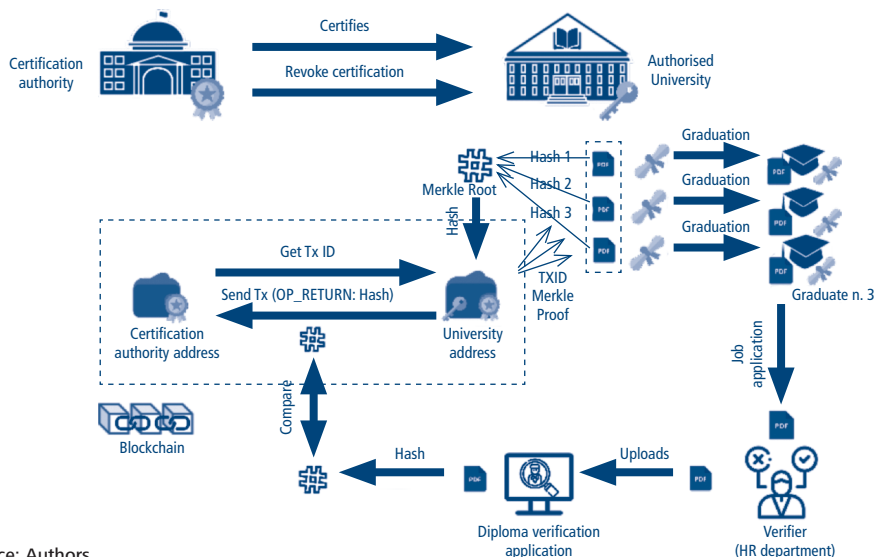
3.6.2 The process of verifying diplomas on blockchain

Anybody who possesses a copy of original PDF diploma file with augmented metadata that was is-

sued on the blockchain can validate it. For this purpose, an open-source web-based interface is used. Following our proposed structure of European Union institution governing the process, an official website of an institution can be used for the validation, however, technically anyone could be running their own validator process as well.

1. *Extracting blockchain proof metadata:* The PDF diploma is now augmented with the credentials metadata, TxID and merkle proof. The latter two need to be removed from the set of data, as these are not part of the blockchain transaction in which the diploma was recorded. The extracted metadata are saved for later usage (step 3).
2. *Calculate hash of the remaining certificate:* The remaining PDF diploma with metadata is hashed. If the diploma's metadata weren't amended, the calculated hash is identical with the hash of the diploma calculated during issuing. If there was any, even a slight tampering with the diploma or with the metadata, the hash will be completely different.
3. *Calculate merkle root from extracted metadata and hash:* The extracted merkle proof is en-

Figure 2 » Permissionless blockchain design of issuing and verifying diplomas



Source: Authors

riched by the calculated hash from step 2. These two will be able to reconstruct the original merkle root of all the group of diplomas hashed together in one transaction which is stored in blockchain.

4. *Get the merkle root stored in blockchain:* The extracted TxID is used to find the blockchain transaction where the diploma was recorded. Within this transaction, the OP_RETURN script is identified that is followed by a merkle root, which is the merkle root of all the group of diplomas hashed together in one transaction on the blockchain.
5. *Compare merkle roots:* Merkle roots from step 3 and 4 are compared. If they match, the diploma is verified to be the same as the original one.

3.7 Revoking diplomas and granting/revoking authorizations to universities

Described above is the process of issuing and verifying diplomas on the blockchain, but some related functions should be taken into account for a complex applicable process design on the European Union level. There is a need to plan for such circumstances, as a need to revoke already issued diplomas or predefine an expiration date on the diploma's (or any other certificate's) validity. From another perspective, there is also a need to plan for the design of managing the issuing rights to an educational institution by the certification authority.

Revoking and changing the data on blockchain or controlling the rights to issue diplomas are not notions intrinsic to the blockchain infrastructure. As by default, the blockchain's data are immutable and the structure is open for participation to all potential users. If these process needs are to be solved for, they can be addressed by implementing one of the following options:

- Introduction of a centralized authority that would be the sole user allowed to change records. This is not a proposed solution as it conflicts the philosophy of a permissionless blockchain technology and also makes the design vulnerable to the issue of single point of failure.
- Introduction of a permissioned (consortium) blockchain design in possession of European authorities. This is suitable option, but the limitations are, that the infrastructure itself is not in existence yet and also the proof of completed education is dependent on European Union's infrastructure and it is not a sovereign proof that would remain valid when the European authorities would reject or lost the infrastructure in the future. On the other hand, it allows for a more sophisticated process design, in which other applications could be explored for application as well, e.g. identity management, securities registry and other processes that require more variability and data changes in time.
- Adding a layer of another decentralized technology atop Bitcoin's blockchain or as a side-chain. This is a possible solution, but it is significantly increasing the technical complexity of the proposed design. On the other hand, this approach also allows for a more sophisticated process design as the previous one and can be design with a permissionless or permissioned approach.
- Usage of meta-protocol operations that can be stored in bitcoin transaction behind OP_RETURN script in a permissionless design, without need for additional layers atop Bitcoin's blockchain. This proposal will be further analyzed as a meta-protocol. As a use case, the design of Blockchain Document Issuing Protocol (BDIP) will be used (Karasavvas, 2018).

3.7.1 Meta-protocol in practice — revoking and changing diplomas

The BDIP meta-protocol is defined by messages recorded in OP_RETURN script in Bitcoin transactions. These messages are limited to maximum of 80 bytes that can be stored in the blockchain. This condition is set by design of Bitcoin blockchain because it has limited space in every block and cannot be increased. This means that each message,



- representing particular operation, must be relatively short in data.

A set of specific messages sent from the same address can be used as a rule to record a transaction as part of which the nature of transaction is explicitly stated. As such, the transaction could state if it is a new diploma being issued, an already registered diploma being revoked or making any changes in the validity of a diploma. We will describe the functions of BDIP on an example of revoking an already issued diploma.

Let's consider an issued diploma with a registered proof on Bitcoin's blockchain that should be revoked. Revocation is performed by sending a new transaction from the same issuing address to the same destination address with a message that orders the revocation. The original transaction is still valid if it would be verified separately, but the verification program has to check all the transactions between two same addresses when checking for validity. Additionally, as the OP_RETURN script is limited to 80 bytes in information storage value, only up to two independent diplomas (or two transactions with batch of diplomas) can be revoked in one revoking transaction. Given that revoking diplomas is not a daily operation, this limitation is not considered to be a main disadvantage.

3.8 Another use of meta-protocol – granting and revoking certification authority

Granting a permission to issue certificates can be maintained with the use of meta-protocol as well. For such purpose, a certification authority within the validation program would need to be defined. This can be either one single EU institution or a consortium of each Member State's institution and some European level institutions (e.g. European Foundation for Management Development). It could be then predefined in the structure of validation software that there exist for example 50 different certification authorities (for 27 Member States and 23 European institutions). This number of certification authorities can be changed by updating

the verification program that also means that other institutions could use this technology only by changing the predefined certification authorities in another copy of validation software.

At the inception of the structure, there is one single certification authority (EU institution) that grants a permission for certification to other certification authorities. This would be recorded as a transaction in blockchain. Valid diplomas can be therefore only issued and registered in blockchain by those agencies with certification authority. As the infrastructure is open source and it is possible for anyone to participate, this process design eliminates the diplomas being issued by an unauthorized agency. Agencies without a certification authority can still record transaction in blockchain and it would be equally possible to verify the euthenics of the educational diploma. However, the certificate would be issued by an agency without a proof of certified authority. With the use of meta-protocol, the right of certification authority can be revoked by sending a transaction (from the initial certification authority overlooking the authority management) to this agency. If such right would be revoked, only those diplomas that were issued in between these two transactions being registered in blockchain, would be considered as valid by the verification process.

It is also possible for one certification authority to hold multiple addresses for blockchain transactions. In terms of the solution scalability and its expansion to issuing more than one type of diploma by the institution, each address would represent a certain type of diploma or certificate. In that case, one address could be used for graduate diplomas of bachelor's degrees, another address for master's degrees, other for language certificate, and so on.

4. Estimating the usability and scalability of proposed process design

However, we need to remain conscious about the possible restrictions of Bitcoin blockchain network in terms of scalability. As Bitcoin's blockchain sole

purpose is not to record educational diplomas, the more use cases would be deployed on it, the more difficult it would be to technically avoid overwhelming the network. Bitcoin is capable in current circumstances to process 8 million transactions per day (Coinmetrics, 2020). The transactions may become slow and expensive to perform if many operations are used at once and can also negatively affect the main purpose of Bitcoin – payments.

The number of ongoing transactions needed for maintaining diplomas management on EU level is mostly based on the number of graduation events in the EU that means on number of occasions that are needed for issuing new batch of certificates. Unfortunately, this number is not known, even the number of higher educational programs is not publicly known. The closest available data is the number of higher educational institutions and that is approximately 17 700 institutions (ETER, 2020).

From the number of needed institutions, we can estimate the number of study programs and then estimate number of graduation events. Also, some transactions are needed for revocation and for certifying certification authorities and higher educational institutions in the European higher education area, but this will not impact the network as much as these would not be so common.

For our estimation of usability, we will assume that every higher educational institution has 10 educational programs, and every program has 4 graduation events per year. This estimation is probably highly inaccurate, but it should give us at least order of magnitude estimate about needed transactions. In this case, the number is 177 000 transactions per year. If we also add some transactions for revocation and accreditations, we can use the number of 200 000 transactions. That is approximately 0,025% of maximal daily limit for Bitcoin blockchain throughput. We should also take into account the seasonality of graduation events, but the Bitcoin network should be capable to manage all the transactions even if they would happen in a single day.

For estimation of future scalability, we can take into account not only number of graduation events in the future which tend to be approximately on a same order of magnitude, but also future use cases that may be added to the verification platform. If the verification would become popular, there is possible reaction from other credentials issuers (secondary schools, private courses etc.) that would like to use Bitcoin as well. As the variety of use cases is wide, the estimation of future usage is not possible to test, but we can at least clarify, that limited throughput of the Bitcoin network would be bottleneck of the wider use cases adoption.

On the other hand, also technological development in the Bitcoin is increasing the effectivity and throughput of the network itself with several efficiency improvements as Segregated Witness is (Techniques to Reduce Transaction Fees – Bitcoin Wiki, 2019) and Taproot and Schnorr may become in the near future (GDR, 2019).

5. Conclusion

The findings of this study clearly show that the blockchain technology offers an architecture that allows for immutable recording of data into its structure. This attribute is suggested to be leveraged for the recording of educational diplomas in digital interface. The professional community has been engaged in developing a working solution mainly by exploring the structure of permissionless blockchain, such as Bitcoin, which allows for a public participation in the network. This paper is not exception and besides the simple recording of data into the database, the development of the solution has been reached to the point where the records in the database can be also revoked and used for certification of higher education institutions and certifying institutions by using meta-protocols in OP_RETURN script.

Also high level estimates for the stability and future scalability of the network were taken into account. Bitcoin network should be stable for using our proposal in European educational area, but



only for the purpose of verification of higher educational diplomas. If more use cases (types of credentials) would be added to the system, it could have a negative effect on the Bitcoin network and also the process itself would become unstable and expensive.

Based on the above, for future research is recommended to focus on alternative approaches that were mentioned in this paper. Two of these approaches were identified as feasible for the improvement of the current process design. Both of these are more flexible and robust and would be necessary if the system should maintain more use cases than sole management of university diplomas.

First option is to leverage an additional permissionless blockchain design in relation to the Bitcoin blockchain in the form of a sidechain or additional layer above Bitcoin structure. This is also approach that was chosen by Microsoft's ION network and their decentralized identity use case.

Second option is to leverage the design of a specialized blockchain infrastructure tailored for the purpose of sharing unique information in a permissioned environment (so called consortium blockchain). In this approach, infrastructure is owned by the operator of the network – European Union and Member States' institutions. The downside of this proposal is that it is not separating operator of the network from the issuer and verifier. But this feature may be also considered as a benefit, at least from the perspective of European institutions. This approach is also decreasing costs paid in fees in widely used Bitcoin network. But it is also decreasing self-sovereignty of credentials associated with the ownership of the network by European institutions and increasing uncertainty with initial deployment of the new and untested infrastructure.

Educational diplomas are a tangible proof of the obtained knowledge for any type of students. The importance of diplomas is widespread and valid throughout one's life, mostly in relation to job seeking and job application in fields, where the quality of education is a relevant factor in the success on the job market. In recent years, we have experienced cases in which these diplomas have been forged and therefore their value compromised. It is estimated that 6% of Bachelor's degree are falsely claimed.

REFERENCES

- [1] ATTEWELL, P., DOMINA, T.: Educational imposters and fake degrees. *Research in Social Stratification and Mobility*, 2011, 29, pp. 57–69.
- [2] BARÁK, V.: VŠE v Praze předávala falešné diplomy, padla žaloba. *Týden.cz*, 2016. [online]. [cit. 2016-07-13]. Dostupné z: <https://www.tyden.cz/rubriky/domaci/skolstvi/vse-v-praze-predavala-fale-sne-diplomy-padla-zaloba_387151.html>.
- [3] BBC RADIO 4: Degrees of deception. *BBC Radio 4*, 2018. [online]. [cit. 2018-01-16]. Available from <<https://www.bbc.co.uk/sounds/play/b09ly731>>.
- [4] BEAR, K., RAUCHS, M.: Financial services leads the development of enterprise blockchain. *Global Digital Finance*. 2020. [online]. Available from <<https://www.gdf.io/wp-content/uploads/2020/10/GDF-FS-Leads-The-Development-of-Enterprise-Blockchain-Vignette-October-2020.pdf>>.
- [5] BF: *Blockcerts Forum*, 2020. [online]. Available from <<https://community.blockcerts.org/>>.

- [6] BITINFOCHARTS: Bitcoin (BTC) statistics – price, blocks count, difficulty, hashrate, value. *BitInfoCharts*, 2020. [online]. [2020-09-23]. Available from: <<https://bitinfocharts.com/bitcoin/>>.
- [7] BLANDIN, A. et al.: *3rd Global Cryptoasset Benchmarking Study*. Cambridge: University of Cambridge, 2020.
- [8] BLOCKCERTS: The open standard for blockchain credentials. *Blockcerts*, 2020. [online]. Available from <<http://blockcerts.org/>>.
- [9] BNS: *Bitcoin Node Software*, 2020. [online]. Available from: <<https://luke.dashjr.org/programs/bitcoin/files/charts/software.html>>.
- [10] CHEN, G. et al.: Exploring blockchain technology and its potential applications for education. *Smart Learning Environments*, 2018, 5(1), pp. 1–10.
- [11] COINMETRICS: CM Network Data Pro. *Coinmetrics*, 2020. [online]. Available from: <<https://coinmetrics.io/cm-network-data-pro>>.
- [12] DINGLE, P.: ION – booting up the network. *Techcommunity.microsoft.com*, 2020. [online]. [cit. 2020-06-10]. Available from: <<https://techcommunity.microsoft.com/t5/identity-standards-blog/ion-booting-up-the-network/ba-p/1441552>>.
- [13] DUMČIUS, R. et al.: *Study to Support the Revision of the Diploma Supplement and Analyse the Feasibility of its Digitalisation at European level (NC-02-17-484-EN-N)*. Brussels: European Commission – Directorate-General for Education, Youth, Sport and Culture, 2017.
- [14] EC: *The European Higher Education Area in 2018: Bologna Process Implementation Report*. Luxembourg: Publications Office of the European Union, 2018.
- [15] ETER: *The European Tertiary Education Register*, 2020. [online]. [cit. 2020-09-24]. Available from <<https://www.eter-project.com/#/search>>.
- [16] GDR: Taproot & Schnorr: scalability and privacy upgrades for bitcoin. *Galaxy Digital Research*, 2019. [online]. [cit. 2019-11-19]. Available from <<https://medium.com/galaxy-digital-research/taproot-schnorr-scalability-and-privacy-upgrades-for-bitcoin-e81b0df9101b>>.
- [17] GRECH, A., CAMILLERI ANTHONY, F.: *Blockchain in Education (JRC108255)*. EUR – Scientific and Technical Research Reports. Luxembourg: Publications Office of the European Union, 2017.
- [18] KARASAVVAS, K.: Revoking records in an immutable ledger: a platform for issuing and revoking official documents on public Blockchain. In *Crypto Valley Conference on Blockchain Technology*. New Jersey: Institute of Electrical and Electronics Engineers, 2018.
- [19] LIELACHER, A.: How many people use bitcoin in 2020? *Bitcoin Market Journal*, 2020. [online]. [2020-02-05]. Available from: <<https://www.bitcoinmarketjournal.com/how-many-people-use-bitcoin/>>.
- [20] MEHAR, M. I. et al.: Understanding a revolutionary and flawed grand experiment in blockchain: The DAO attack. *Journal of Cases on Information Technology*, 2019, 21(1), pp. 19–32.
- [21] MERKLE, R. C.: *Method of Providing Digital Signatures* (Patent No. US4309569A). Alexandria: United States Patent and Trademark Office, 1982.
- [22] NAKAMOTO, S.: *Bitcoin: A Peer-to-Peer Electronic Cash System*. Washington: The United States Sentencing Commission, 2008.
- [23] NAKAMOTO, S.: Bitcoin Block 0. *Blockchain*, 2009. [online]. [cit. 2009-03-01]. Available from: <https://blockchain.info/tx/4a5e1e4baab89f3a32518a88c31bc87f618f76673e2cc77ab2127b7afdeda33b?show_adv=true>.
- [24] SAUDI GAZZETE: Forged degree scandal rocks Kuwait. *Saudigazette*, 2020. [online]. [cit. 2020-07-22]. Available from <<http://saudigazette.com.sa/article/595828>>.





- [25] VALÍK, L.: *Analýza kryptoměn se zaměřením na podnikání v České republice*. [Diplomová práce]. Praha: Vysoká škola ekonomická, 2018.
- [26] VAUGHAN, W., BUKOWSKI, J., WILKINSON, S.: *Chainpoint—Blockchain Proof & Anchoring Standard*, 2020. [online]. [cit. 2020-09-24]. Available from <<https://chainpoint.org/>>.
- [27] YAGA, D., et al.: *Blockchain Technology Overview. NIST Internal or Interagency Report 8202*. Gaithersburg: National Institute of Standards and Technology, 2018.

Diplomas on Blockchain — Proposal for Permission less Process Design in a European Educational Area

ABSTRACT

The aim of the paper is to search for solutions on how to issue, verify and revoke educational diplomas and its certification authorities on the European Union level. Bitcoin as a representative of public permissionless blockchain structure was chosen as the preferable technological infrastructure to leverage this solution due to its security and immutability. A detailed process design was introduced and similar, already deployed use cases, were analyzed. The possible usage on a level of European educational area was estimated and high-level tests of stability and future scalability were performed. Limits of this infrastructure were identified and alternative solutions that explore more flexibility in the process design are offered in a second layers above Bitcoin infrastructure or in permissioned blockchain solutions.

KEYWORDS

Diplomas on Blockchain; diploma registry; bitcoin, OP_RETURN; meta-protocol; European Educational Area

JEL CLASSIFICATION

I21; I28; O33; O38



Funding a Selected Group of Czech NGOs from Public Resources¹

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* 1. Introduction

The role of non-governmental non-profit organisations (NGOs) has been increasing exponentially worldwide, fulfilling a wide range of socio-economic functions in society (Casey, 2016; Salamon, 2010). Their services cover a variety of mutually and publicly beneficial activities. Just as individual NGOs work differently, different resources make NGO activities possible. An important part of NGO financing is often through public resources, which in most countries is considered as a standard instrument of financial support for the required segment of the national economy (e.g., Lu, 2015; Špalek et al., 2017; Stick and Ramos, 2021). The impact of public grants can be seen in providing relevant NGO services while expanding their density and quality (Lecy and Van Slyke, 2012). Further, public funds also play an important role in achieving the financial stability and financial health of individual organisations (e.g., Kingma, 1993; Abraham, 2006; Bowman, 2011; Ecer, Margo and Sarpcá, 2016; Chikoto-Schultz and Neely, 2016; Myser, 2016). However, the increased num-

ber of NGOs competing for public subsidies while, at the same time, the amount of public finance has not been increasing proportionally, has created challenges and barriers to obtaining public financial support (Hommerová and Severová, 2018).

Despite the indisputable need for some NGO services, calls have recently been voiced to limit their public support in the Czech Republic by those who seek the favour of potential voters on the unpopularity of NGOs (Navrátil and Vaceková, 2014). This opinion is also heard from the leading representatives of the Czech state (Czech Radio, 2018), although the Czech Government has stipulated public support in selected government documents (e.g., Government, 2015; Government, 2018b).

Given the increasing pressure exerted on NGOs, this article outlines the real conditions of the importance of public funding within a selected group of homogeneous NGOs and verifies the factors that influence the amount of this aid in the Czech Republic. To date, international and domestic research on the determinants of the amount of public grants allocated to NGOs has focused primarily on organisations providing professional services. →

¹ The article was elaborated within the student research projects ZdrNNO: Zdraví nestátních neziskových organizací (The Health of Non-governmental Non-profit Organizations MUNI/A /0961/2018) and UNNOSP: Udržitelnost nestátních neziskových organizací a sociálních podniků (Sustainability of Non-Governmental Non-Profit Organisations and Social Enterprises) supported by the Grant Agency of Masaryk University (MUNI/A /0961/2018, MUNI/A/1068/2019).

→ The membership-based NGOs that perform their activities voluntarily tend to have been neglected. Therefore, this area provides an opportunity for further research.

This article builds on the existing findings covering the issue of public grants directed to NGOs. In view of the rather limited knowledge, the study offers an insight into the financing of the group of Czech membership-based NGOs working with children and youth. The sample consists of 449 NGOs. These organisations are associated under one organisational network (the basic organisational units of Junak – Czech scouting) with an identical mission, legal form, internal structure, etc. The activities of the relevant NGOs (“leisure-time activities” or “leisure activities and recreation” focused on children and youth) are connected with “a smaller wave of negative emotions” (not only in the Czech Republic). This approach enables a wider (and not only scientific) debate about the organisations that are characterised by a relatively more diverse income structure, as pointed out by other researchers (see, e.g., Fónadová, Špalek, Hyánek, 2017). Moreover, these organisations are less dependent on public resources mainly obtained due to their broad membership and the friendly entities from the given organisational network, which they do not compete with when applying for public funding.

The paper is organised as follows. After introducing the role of public resources in the financing of NGOs (in general and in the Czech Republic), and after introducing the generally accepted determinants of the amount of public grants, the selected group of NGOs is further defined and researched. The analysis is divided into two parts. The first focuses on analysing the importance of public funding for the selected group of organisations and the second identifies and verifies the factors that influence the amount of support. After presenting the research outcomes and the discussion, the limitations of the study are indicated along with the conclusion outlining potential implications.

1.1 Public funding of NGOs

NGOs, as defined by Pestoff (1995) and Salamon and Anheier (1997), are important elements for the functioning of society. They conduct activities in areas which, for various reasons, are neglected by the remaining sectors of the national economy (private profit sector, public sector, household sector). Basic economic theories justify the existence and activities of NGOs as tools that correct market and government failures in a perfect form (Weisbrod, 1997; Salamon and Anheier, 1998 – Government/Market Failure Theory), and in a less perfect form (Salamon, 1987; Yaguai, 2012 – Interdependence Theory). Further, these theories often view NGOs as the creators of innovative solutions (Quadagno, 1987 – Welfare State Theory) or as sources of reliable information and honest behaviour in the milieu of uncertainty (Wagner, 1997 – Trust Theory), which the public can turn to with confidence (e.g., Vyskočil and Pejcal, 2015).

NGO activities can be encountered in various sectors that are rarely associated with profit generation or “scoring political points”. Examples of these include work with national minorities, equal opportunities for men and women, activities with drug addicts, etc. It is in these areas that NGOs perform an irreplaceable activity, which, given the theoretical background outlined above, is largely supported by public funds at all levels of public budgets. The need for public resources often lies in the fact that the activities of NGOs are, to ensure wide availability, conducted at a price that cannot cover the real costs (Stick and Ramos, 2021). Frequently, the beneficiary does not pay anything or only part of the price at which the product would be provided by profit-making entities. The difference between the price for clients and the real costs is covered by public grants or other resources generated by NGOs (e.g., donations from companies and individuals). According to recent surveys (Salamon et al., 2017; or Salamon et al., 2013), public funding accounts for around 35% of the financial resources of NGOs on a global scale. This

Table 1 » *The distribution of support from the individual levels of public budgets among the selected areas of NGO activities in 2016*

Levels of the Czech public budgets	Total		Physical education	Social affairs, and employment policy	...	Leisure activities and recreation	
	billion	%	%	%	%	billion	%
State budget	10.9 CZK	60.8	28.5	37.2	...	0.2 CZK	1.9
Regional budgets	2.8 CZK	15.9	38.0	20.2	...	0.1 CZK	3.9
Municipalities	3.9 CZK	22.1	48.8	17.6	...	0.3 CZK	6.6
State funds	0.2 CZK	1.2	0.0	0.0	...	0.0 CZK	0.0
Total	17.9 CZK	–	34.2	29.7	...	0.6 CZK	3.2

Source: author's own processing based on The Analysis of NGO Financing from Public Budgets in 2016.

also applies to the current funding scheme in Central and Eastern Europe (for the case of Poland and Croatia, see Meyer et al., 2017; for the Czech Republic, see Fořtová, 2019 or CSO, 2019).

The Analysis of Funding for NGOs from Selected Public Budgets for 2016 (Government, 2018a) gives an overview of the financial support for NGOs from the individual levels of the Czech public budgets (primarily the state budget), as well as an overview of the areas of use: mainly physical education, social affairs, and employment policy (leisure activities and recreation have significantly lower support). The overview of the group of organisations that receive this support is also provided: approximately 12,000 entities, i.e. 9% of existing Czech NGOs. Selected data from The Analysis of Funding for NGOs from Selected Public Budgets for 2016 are indicated in table 1.

1.2 The determinants of the amount of public grants

The existing analyses and research primarily address the share of public finance on the overall NGO resources (e.g., Prouzová, 2015; Špalek et al., 2017) or are concerned with the crowding out of other funding resources by public resources (e.g., Lu, 2016; Hladká and Hyánek, 2017). However, ex-

ceptions can be found that focus on the determinants of the amount of public funds allocated to NGOs.

The link between public grants and the internal organisational (i.e. institutional) setting of supported entities is explored outside the Czech Republic. In a sample of service-providing organisations in Massachusetts (191 NGOs), Stone, Hager, and Griffin (2001) reveal the positive link between the amount of grants and lower administrative costs. On the other hand, this finding was not proven by Ashley and Van Slyke (2012), who used the data on NGOs receiving grants from public authorities in the state of Georgia (590 NGOs). The authors did not find any evidence of government favouring organisations with lower administrative costs.

Having studied the group of charity organisations in California (200 NGOs), Suárez (2010) highlights the positive impact of previously received public funds on the probability of receiving additional funds and the positive impact of the professionalization of organisational functioning and the role of creating partnerships with other subjects (non-profit, for-profit, public authorities). Using the example of organisations active in human services in California (528 NGOs), Garrow (2011) states the importance of the milieu in which the or-

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rganisations operate. As decisive factors for the level of public funds received by organisations offering human services in Maryland (97 NGOs), Lu (2015) primarily identifies the level of bureaucratisation, the strength of the consensus on the progress of working with the public sector and previously allocated public finance. The latest study by Dong and Lu (2019), on the factors affecting the level of public grants in China (318 NGOs), highlights the impact of the nature of the board members and the degree of formalisation of the organisation.

Across the mentioned studies, the authors analysed the effect of the size (measured as the total NGO revenues) and the age of the organisation on the level of public funding received. In the case of age, the effect is relatively consistent, suggesting no significant impact of the length of existence and the public funds (Ashley and Van Slyke, 2012; Garrow, 2011; Suarez, 2010). The exception is the findings by Lu (2015), who found a negative association between age and public funding. In terms of size, the level of total revenues is positively associated with the level of grants received (Ashley and Van Slyke, 2012; Lu, 2015). Lu (2015) analysed the effect of the diversified financial structures and concluded that the revenue diversification does not affect the amount of public funding. However, by focusing solely on certain aspects of the revenue structure, Stone et al. (2001) found that the level of their own revenues is negatively associated with the level of government funding. The authors suggest that NGOs which generate high revenues from commercial activities tend to be less dependent on public funding as they can provide the necessary resources themselves.

The competition an organisation experiences from other NGOs applying for government funds was also analysed as a further factor affecting the level of public grants. The authors assumed the higher density might cause lower levels of available funding as the competition may reduce the probability of receiving contributions or the level of funds as an authority may split the funds be-

tween larger numbers of applicants. However, Lu (2015) did not find any significant effect of the level of competition on the grants received. However, Dong and Lu (2019) and Garrow (2011) found that organisations with greater competition competing for resources increases the possibility of attaining government support. The authors concluded that these organisations are more motivated to seek government funding to enhance their resource base.

Some authors analysed the link between the amount of public funding and the field the NGOs operate in or the type of activities they are engaged in. Dong and Lu (2019) and Garrow (2011) found that engaging in policy advocacy activities is positively linked with the level of public grants received. However, when focusing on the effect of the specific field, the authors found that hardly any were associated with a higher level of the subsidy received. Only the organisations working with youth were linked to lower levels of grants. Ashley and Van Slyke (2012), on the other hand, concluded that the field the NGOs focuses on is important. The authors found that NGOs providing services in the fields of education, health and human services are associated with a higher probability of accessing grants than NGOs engaging in other sectors, such as art.

In the Czech milieu, only the authors Navrátil and Vaceková (2014), Navrátil and Vaceková (2015) examined the determinants of support for Czech NGOs from European funds. Like the foreign authors, when selecting the main determinants of the amount of public funds, they took into account the characteristics and qualities of the supported NGOs. They also considered the characteristics and qualities of the actual projects. Among the supported organisations, the legal form of the organisation, the education of the director, the presence of the fundraiser in the organisation, and previous experience with state support proved to be the key determinants in the amount of state support. In terms of the project parameters, the budget, the number of partners and the time of implementation played a key role.

2. Methods and Data

The research was conducted using data from 449 NGOs working with children and youth. The data was collected for the year 2015. The analysis presents the role of public finances in the financial resources of NGOs with homogeneous aspects. Due to their membership of one organisational network (the basic organisational units of Junak – Czech scouting), these NGOs are characterised by a large number of common features. They all have a uniform legal form (association) and mission (i.e. the purpose for which they were created), a similar age (originated after 1989), a uniform organisational structure (a management system), and a volunteer base who usually replace the work of professional employees (i.e. they are membership-based organisations). The differentiating features of the NGOs in the selected group are the number and structure of their membership base, the location of their performance, the value of their property/assets, and the value of their incomes/revenues, which often include public resources. The analysis presents the role of public finance in the financing of the selected type of NGOs and further analyses the factors that affect the amounts allocated to these organisations.

The following research questions were set:

- *RQ1: What is the role of public finance in financing NGOs working with children and youth?*
- *RQ2: What variables affect the amount of public funds allocated to NGOs focusing on work with children and youth?*

The descriptive statistics were used to answer RQ1. The financial data from the financial statements of the organisations was collected for the period 2008 to 2015. The data covered information about the amount and structure of property/assets, the amount and structure of incomes/revenues and expenditures/costs, and the location of the organisations. Further, the data regarding the population information was retrieved from the Czech Statistical Office.

Subsequently, to answer RQ2, a multiple linear regression was applied. Although the initial sample consists of 449 NGOs, it was reduced by 10% due to the presence of outliers. Therefore, the analysis was based on a sample of 404 observations.

Given the specific features of the NGOs selected for our research (uniform mission, legal form, the extent of bureaucratisation, co-optation, the staffing of the managing board, the importance of volunteers, etc.), the choice of the selected variables is in line with previous research only to a very limited extent. Data that could not be obtained about the given group of NGOs from internal entries and public registers was also excluded (e.g., information on partnerships, the directors' education, etc.).

The basic function for the amount of allocated public financial support and other examined factors can be summarised as follows:

$$y_i = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k + \varepsilon_i \quad (1).$$

where the subscript i ($i = 1 \dots 449$) represents each NGO, α is the constant of the equation, $\beta_1 \dots \beta_k$ are the partial coefficients to be estimated and ε_i is the error term (Verbeek, 2008).

The following factors with the potential to affect the level of public financial support were determined as explanatory variables:

- The number of underage and adult members.
- Own resources: the amount of revenues generated by the organisation from their own and commercial activities.
- Donations: the amount of donations received per each organisation.
- Membership fees: the amount of contribution received from their members.
- Economic result: the difference between the income and expenses of an organisation representing the level of the organisation's profit or loss over one year.
- The number of public subsidies per region: the number of grants provided by regional public authorities to the NGOs in the region where the specific NGO is located.



The financial data for each NGO and the data regarding the membership base were obtained from each NGO separately. Further, data regarding public grants was collected. As the sample of selected organisations rarely receives grants from the central level and as the data regarding the subsidies received from the municipal level was not accessible, the analysis only used data for the public subsidies from the regional level. The data was collected from the Analysis of Funding for NGOs from Selected Public Budgets (Government, 2018a). The descriptive statistics are provided in Appendix 1.

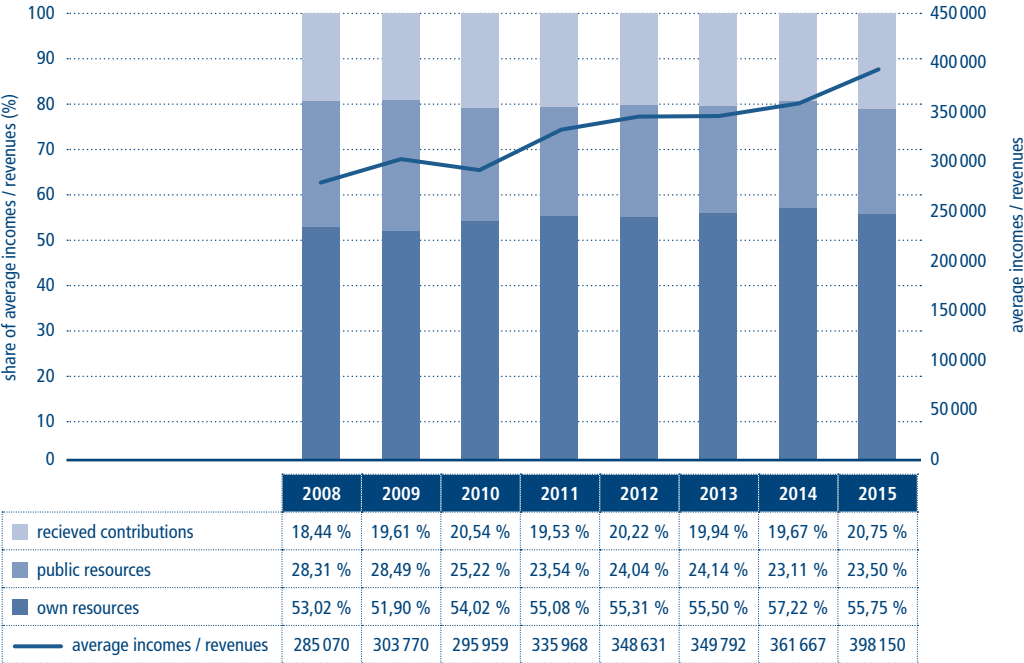
3. Results

3.1 The Importance of Public finance for the Selected NGO Group

The analysis of the income/revenue side of the selected NGO group, as shown in figure 1, indicates that between 2008 and 2015 there was an increase in the resources available to the organisations. The data defines three large groups of financial resources: the organisations’ own resources, public resources and the contributions received. The financial resources of the given group of NGOs have a relatively stable share of their year-on-year representation so it is possible to assume the existence of adequate diversity.

Public resources contribute to the funding of the selected NGO group in the range between 23%

Figure 1 » Average amount of incomes/revenues (in CZK) and their structure by the basic resource categories



Source: the author’s own processing based on the accounting data of the selected NGOs.

Table 2 » Regression analysis outputs

Variables	Public grants
Own Resources	0.0180 (0.0139)
Donations	-0.107 (0.0668)
Membership fees	-0.102 (0.0877)
Economic results	0.183*** (0.0575)
Members under 18	378.9*** (101.4)
Members over 18	250.3 (202.9)
Grants in the region	22.11*** (4.220)
Constant	1,010 (5,646)
Observations	397
R-squared	0.310

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
 Source: authors' own elaboration.

and 28%. Thus, these represent the second most important category after their own resources. Within the aggregated data, the fact that public funding reached the majority of NGOs within the scope of our definition (410 entities out of 449) is somewhat diminished: only 9% of entities do not use public funds. The funds obtained by the selected group of NGOs come from all levels of public budgets. NGOs apply for support from municipal and regional budgets, while hierarchically superior organisations can also participate in drawing and redistributing funds from higher-level public sector budgets (individual regions and state budgets).

The presented values also point to the fact that the given NGOs, as a whole, are rather below the values that are attributed to the share of public resources in NGO financing by Fořtová (33.3% in 2018) (2019) and by Fónadová, Špalek and Hyánek (70.3% in 2008; 62.2% in 2013) (2017). This indicates that the public funds play a less crucial role for the NGOs working with youth and children than for other oriented NGOs. The public funds directed to the investment remain an exception, which, despite its importance, is not characterised by a high frequency across the individual selected NGOs or across the individual years.



3.2 Determinants of public funding received

To identify the factors affecting the amount of public funds received, a multiple linear regression was conducted (table 2). The results suggest that the membership structure partly affects the level of the public funds received. More specifically, the number of members under the age of 18 have a positive impact on the amount while the number of older members does not determine the contribution. As the observed NGOs work with children and youth, the public authority who decide the resource allocation may consider the number of

found that the increasing number of allocated subsidies positively affected the public contribution received. Therefore, it is suggested that the competition of those applying for the subsidy does not reduce the chance of receiving public funds. Similar findings were found by Dong and Lu (2019) and Garrow (2011).

4. Conclusion

NGOs have long been criticised for their attributed dependence on public resources. In the example of a specific group of membership-based NGOs asso-

The role of non-governmental non-profit organisations has been increasing exponentially worldwide, fulfilling a wide range of socio-economic functions in society. Their services cover a variety of mutually and publicly beneficial activities. Just as individual NGOs work differently, different resources make NGO activities possible.

youths engaged with the specific NGO to be crucial.

Regarding the financial indicators, the analysis shows that the level of their own revenues does not affect the contribution received. This is in contrast to the findings of Stone et al. (2001) who found a negative association. Although the analysis detected a negative impact of the level of the donations received and the level of membership fees, the effect is insignificant. On the other hand, the economic result of the organisation positively affects the public contributions received. Therefore, the outputs suggest that to be a successful applicant for a public subsidy, the composition of the revenue structure is not crucial, but it is important to reach a positive economic result. Similar findings were found by Lu (2015) who also detected an insignificant effect of the resource diversification on the level of subsidy.

Finally, the model estimated the effect of the number of subsidies allocated within the region and the effect on the public funds received. It was

ciated within one hierarchical structure with multiple common features (mission, legal form, organisational structure, the importance of volunteers, etc.), the research aimed to outline the importance of public funding in their resource structure and to verify the factors that influence the amount.

The results of the descriptive analysis revealed that public resources contributed (in the period from 2008 to 2015 in a relatively stable way) to the financing of the given group of NGOs in the range of 23% to 28%. Public resources thus represent the second most important category of funds used by NGOs to finance their operation or to ensure their long-term financial stability. In the long term, the selected NGOs have been operating with balanced economic results. A potential loss of public resources would probably lead to negative consequences. The combination of persistent negative public opinion towards NGOs and the possibility of a decrease in future resource allocation to NGOs (for example, due to the COVID pandemic situation), the high dependence on public funds can be

challenging for the sustainability of the NGOs (Stick and Ramos, 2021) and call, therefore, for higher resource diversification (Hommerová and Severová 2018; Makýšová and Vaceková 2017). The questions that arise are: To what extent would the loss of public resources actually affect the economic results of the selected NGOs? To what extent could the organisations set their functioning under the austerity regime? It is not clear from the data available, what costs the public funds were used for. Therefore, it is necessary to take into account that the expenditure/cost side is, to a certain extent, defined by the income/revenue side. If an organisation receives public funds, it can be expected that it will increase the level of their activities associated with additional costs. Given the findings outlined above, it is still true that recommendations targeting the need for resource diversification cannot be underestimated (Kingma, 1993; Abraham, 2006; Bowman, 2011; Ecer, Margo and Sarpa, 2016; Chikoto-Schultz and Neely, 2016; Myser, 2016).

The results of the econometric analysis revealed that the amount of public grants allocated to the selected NGOs is influenced by the set of three variables. In particular, these are the number and structure of the membership base, the economic result of the organisation and the number of subsidies distributed to a given group of NGOs in a relevant region. Membership-based organisations often draw on local public budgets according to the number of members under 18 years of age. As the organisations focused on work with children and youth, it can be expected that the authority will take into account the size of the targeted group with whom the organisation is working with. Second, the economic result positively affects the level of public subsidy. The last variable, i.e. the number of subsidies distributed to a given group of NGOs in a given region, raises the most questions

that would deserve a more detailed examination. It can be anticipated that the organisations from a defined group do not compete with each other in the region, but rather try to spread goodwill. Therefore, an important implication based on this finding is that the given NGOs tend to emphasise possible cooperation in building a good “unified” reputation of the whole NGO network. This approach at least pays off in the area of public funding.

The findings presented above are connected to a certain number of limitations. First, the results cannot apply to the whole Czech NGO sector, as the analysed sample considers only one specific field of NGO activities. Second, only some factors with the potential to affect the amount of public subsidies were considered, omitting various organisational aspects (e.g. organisational characteristics and practices) and financial indicators and nonfinancial characteristics (e.g. the number of realised outputs). Finally, only the public grants received from the regional level were considered. These variables were not included due to the lack of data. The potential for improvement is also declared by the relatively low R^2 showing that only 31% of the dependent variable is explained by the proposed model.

Despite the limitations mentioned above, further research could be conducted in this area. Given the crucial role of public funding for the given group of NGOs, the key role of public resources in ensuring the stability of these organisations can be expected, as well as the space for exploring the impact of public funds on the financial health of NGOs. A key role of public resources in a more detailed examination of the indicated determinants of public funds for a wider range of NGOs, which may be active in a larger range of services, can also be expected.



REFERENCES

- [1] ABRAHAM, A.: Financial management in the nonprofit sector: a mission-based approach to ratio analysis in membership organizations. *The Journal of American Academy of Business*, 2006, 9(2), pp. 212–214.
- [2] ASHLEY, S. R., VAN SLYKE, D. M.: The influence of administrative cost ratios on state government grant allocations to nonprofits. *Public Administration Review*, 2012, 72(s1), S47–S56.
- [3] BOWMAN, W.: Financial capacity and sustainability of ordinary nonprofits. *Nonprofit Management and Leadership*, 2011, 22(1), pp. 37–51.
- [4] CASEY, J.: Comparing nonprofit sectors around the world: What do we know and how do we know it? *The Journal of Nonprofit Education and Leadership*, 2016, 6(3), pp. 187–223.
- [5] CHIKOTO-SCHULTZ, G. L., NEELY, D. G.: Exploring the nexus of nonprofit financial stability and financial growth. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 2016, 27(6), pp. 2561–2575.
- [6] CZECH RADIO: *Kolik teče do neziskovek? [How Much Flows into the Nonprofits? The Ministers Send a Fraction from Their Budgets Mainly to Social Projects and to Sport]*. Prague: Czech Radio, 2018. [online]. [cit. 2019-09-15]. Available from: <https://www.irozhlas.cz/zpravy-domov/neziskove-organizace-sektor-financovani-skrty-vlada-andrej-babis-vydaje_1808280600_pek>.
- [7] CSO: *Satelitní účet neziskových institucí 2016. [Satellite Account of Non-profit Institutions 2016]*. Prague: Czech Statistical Office, 2016. [online]. [cit. 2020-10-15]. Available from: <<http://apl.czso.cz/pll/rocenka/rocenka.presB>>.
- [8] DONG, Q., LU, J.: What type of nonprofit organization is preferred in government contracting in China? *International Review of Administrative Sciences*, 2019. Doi: 0020852319862347.
- [9] ECER, S., M. MAGRO, SARPÇA, S.: The relationship between nonprofits' revenue composition and their economic-financial efficiency. *Nonprofit and Voluntary Sector Quarterly*, 2016, 46(1), pp. 141–155.
- [10] FÓNADOVÁ, L., ŠPALEK, J. HYÁNEK, V.: Změny příjmové struktury neziskových organizací v období ekonomické krize. [Changes in revenue structures of non-profit organizations during economic crisis]. In *Na penězích záleží: české neziskové organizace v 21. století. [Money Matters. Czech non-profit organizations in 21st century]*. Brno: Masaryk University, 2017.
- [11] FORTOVÁ, J.: *Produkce neziskového sektoru se zvýšila. [Production of Non-Profit Sector Grew Up]*. Prague: Czech Statistical Office, 2019. [online]. [cit. 2020-10-15]. Available from: <statistikaamy.cz/2018/12/produkce-neziskoveho-sektoru-se-zvysila/>.
- [12] GARROW, E. E.: Receipt of government revenue among nonprofit human service organizations. *Journal of Public Administration Research and Theory*, 2011, 21(3), pp. 445–471.
- [13] GOVERNMENT: *Státní politika vůči NNO na léta 2015–2020. [State Policy with Respect to NGOS for the Years 2015–2020]*. Prague: Government of Czech Republic, 2015. [online]. [cit. 2020-10-15]. Available from: <<https://www.vlada.cz/cz/ppov/rnno/dokumenty/statni-politika-vuci-nno-na-leta-2015---2020-133505/>>.
- [14] GOVERNMENT (2018a): *Rozbor financování nestátních neziskových organizací z veřejných rozpočtů v roce 2016. [The Analysis of Funding for NGOs from Selected Public Budgets]*. Prague: Government of Czech Republic, 2018. [online]. [cit. 2020-10-15]. Available from: <<https://www.vlada.cz/cz/ppov/rnno/dokumenty/rozb- financovani-nestatnich-neziskovych-organizaci-168259/>>.
- [15] GOVERNMENT (2018b): *Hlavní oblasti státní dotační politiky vůči nestátním neziskovým organizacím pro rok 2019. [The Main Areas of State Subsidy Policy with Respect to NGOS for 2019]*. Prague: Government of Czech Republic, 2018. [online]. [cit. 2020-10-15]. Available from: <<https://www.vlada.cz/cz/ppov/rnno/usneseni-vlady/usneseni-vlady-cr-ze-dne-17--rijna-2018-c-668-169241/>>.

- [16] HLADKÁ, M., HYÁNEK, V.: Government subsidies to non-profit organisations and its impact on private donations: regional and subsector models. *Lex Localis – Journal of Local Self-Government*, 2017, 15(2), pp. 283–301.
- [17] HOMMEROVÁ, D., SEVEROVÁ, L.: Fundraising of nonprofit organizations: specifics and new possibilities. *Journal of Social Service Research*, 2019, 45(2), pp. 181–192.
- [18] KINGMA, B. R.: Portfolio theory and nonprofit financial stability. *Nonprofit and Voluntary Sector Quarterly*, 1993, 22, pp. 105–119.
- [19] LECY, J. D. VAN SLYKE, D. M. M.: Nonprofit sector growth and density: testing theories of government support. *Journal of Public Administration Research and Theory*, 2013, 23(1), pp. 189–214.
- [20] LU, J.: Which nonprofit gets more government funding? Nonprofits' organizational attributes and their receipts of government funding. *Nonprofit Management and Leadership*, 2015, 25(3), pp. 297–312.
- [21] LU, J.: The philanthropic consequence of government grants to nonprofit organizations: a meta-analysis. *Nonprofit Management and Leadership*, 2016, 26(4), pp. 381–400.
- [22] MAKÝŠOVÁ, L., VACEKOVÁ, G.: Profitable nonprofits? Reward-based crowdfunding in the Czech Republic. *NISPAcee Journal of Public Administration and Policy*, 2017, 10(2), pp. 203–227.
- [23] MEYER, M., et al.: Patterns in civil society in Central and Eastern Europe: a synthesis of 16 country reports and an expert survey. In *Civil Society in Central and Eastern Europe: Challenges and Opportunities*. Vienna: ERSTE Foundation, 2017.
- [24] MYSER, S. Financial Health of Nonprofit Organizations. Lawrence: School of Public Affairs and Administration and the Graduate Faculty of the University of Kansas, 2016.
- [25] NAVRÁTIL, J., VACEKOVÁ, G.: Empowering the Powerful? Determinants of NGO accession to EU funds in the Czech Republic. In *The 11th PEARL seminar 2014*. Rennes, 2014.
- [26] NAVRÁTIL, J., VACEKOVÁ, G.: Determinants of the success of NGOs' accession to EU funds in the Czech Republic. In *Current Trends in Public Sector Research. Proceedings of the 19th International Conference*. Brno: Masaryk University, 2015, pp. 402–408.
- [27] PESTOFF, V. A.: Citizens as co-producers of social services in Europe – from the welfare state to the welfare mix. In *Reforming Social Services in Central and Eastern Europe – an Eleven National Overview*. Krakow: Cracow Academy of Economics, 1995.
- [28] PROUZOVÁ, Z.: *Přímé a nepřímé financování soukromých neziskových organizací z veřejných rozpočtů České republiky v letech 2008 až 2013. [Direct and indirect financing of private non-profit organizations from public budgets in the Czech Republic between 2008 and 2013]*. Brno: Masaryk university, 2015.
- [29] QUADAGNO, J.: Theories on the welfare state. *Annual Review of Sociology*, 1987, 13, pp. 109–128.
- [30] SALAMON, L. M.: On market failure, voluntary failure, and third-party government: toward a theory of government-nonprofit relations in the modern welfare state. *Journal of Voluntary Action Research*, 1987, 16(1–2): pp. 29–49.
- [31] SALAMON, L. M.: Putting the civil society sector on the economic map of the world. *Annals of Public and Cooperative Economics*, 2010, 81(2), pp. 167–210.
- [32] SALAMON, L. M., ANHEIER, H. K.: *Defining the Nonprofit Sector: a Cross-National Analysis*. New York: Manchester University Press, 1997.
- [33] SALAMON, L. M., ANHEIER, H. K.: Social origins of civil society: explaining the nonprofit sector cross-nationally. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 1998, 9(3), pp. 213–248.
- [34] SALAMON, L. M. et al.: *The State of Global Civil Society and Volunteering: Latest Findings from the Implementation of the UN Nonprofit Handbook*. New Delhi: Center for Civil Society, 2013.



- [35] SALAMON, L. M., SOKOLOWSKI, S. W., HADDOCK, M. A.: *Explaining Civil Society Development: A Social Origins Approach*. Baltimore: John Hopkins University Press, 2017.
- [36] STICK, M., RAMOS, H.: Does municipal funding of organizations reflect communities of need? Exploring trends in Halifax, 1996–2016. *Urban Research & Practice*, 2021, 14(2), pp. 157–159.
- [37] STONE, M. M., HAGER, M. A., GRIFFIN, J. J.: Organizational characteristics and funding environments: A study of a population of United Way-affiliated non-profits. *Public Administration Review*, 2001, 61(3), pp. 276–289.
- [38] SUÁREZ, D. F.: Collaboration and professionalization: The contours of public sector funding for non-profit organizations. *Journal of Public Administration Research and Theory*, 2010, 21(2), pp. 307–326.
- [39] ŠPALEK, J. et al.: *Na penězích záleží. [Money Matters. Czech non-profit organizations in the 21st century]*. Brno: Masaryk university, 2017.
- [40] VERBEEK, M.: *A Guide to Modern Econometrics*. Chichester: John Wiley & Sons, 2008.
- [41] VYSKOČIL, M., PEJCAL, J.: Publicly funded social innovation. In *Current Trends in Public Sector Research*. Brno: Masaryk University, 2015, pp. 416–423.
- [42] WAGNER, A.: *Understanding the Role of Nonprofit Organizations in Modern Welfare States*. Paper presented on seminar “Rapporto sullo Stato Sociale”. Rimini, 1997.
- [43] WEISBROD, B.: *The Voluntary Nonprofit Sector. Economic Theory and Economic Policy*. Lexington: Lexington Books, 1977.
- [44] YAGUAL, Y.: Cooperation mechanism between NGO and government from resource interdependence perspective. *Communications in Information Science and Management Engineering*, 2012, 2(8), pp. 36–42.

Funding a Selected Group of Czech NGOs from Public Resources

ABSTRACT

Czech non-governmental non-profit organisations are often attributed to dependence on public resources. By analysing accounting data, this article describes the importance of public resources for the functioning of a selected group of homogeneous non-governmental non-profit organisations in the field of leisure and recreation that work with youth and children. Further, the factors influencing the amount of public funds allocated to these organisations are analysed on a sample of 404 NGOs. The key results of this research indicate that public resources undoubtedly represent an important source of financing and stability for the selected group of analysed organisations. If these resources became unavailable, the activities of those organisations could be limited, or the recovery of their assets prevented. The amount of public grants for a given group of organisations increases with the frequency of the younger membership base and the extent of an organisations' economic results. The number of competing entities is also positively associated with the amount of public funds.

KEYWORDS

Non-governmental non-profit organisations; determinants of the amount of public funding; leisure time for children and youth

JEL CLASSIFICATION

L31; D33; H39

Appendix 1 » Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Public funding	404	62428.63	52224.62	0	207000
Own resources	404	202788.8	198291.7	0	2276000
Donations	403	17887.26	37878.46	0	512186
Membership fees	398	27798.68	36463.26	0	267838
Economic result	404	13818.96	50573.86	-199000	255000
Members under 18	404	68.62871	41.42362	0	218
Members over 18	404	34.36386	21.17266	5	140
Population	404	144839.8	352124.3	115	1259079
Grants in the region	404	1173.2	666.8452	519	2938

Source: authors' own elaboration.



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