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FROM THE EDITORIAL COMMITTEE

We are giving you the next 30th 1 (2023) issue of the Scientific Journal of the Faculty of Management at the Rzeszow University of Technology entitled "Humanities and Social Sciences".

The aim of the Publisher is to raise the merits and the international position of the quarterly published by the Faculty of Management, that is why we are still developing the cooperation with foreign team of reviewers, as well as an international Scientific Council. The Editors have also attempted to apply for international databases; currently the quarterly HSS is indexed in **Index Copernicus Journal Master List, The Central European Journal of Social Sciences and Humanities (CEJSH) ERIH PLUS, DOAJ and EBSCO**.

The Journal has been also included in the list of projects qualified for funding under the **"Support for scientific magazines program"**.

The articles published in this publication are devoted to the broader issues of the humanities and social sciences. They are the result both of theoretical and empirical research. The subjects covered vary considerably and reflect the interdisciplinary nature of the Journal. We do hope that the papers published will meet your kind interest and will be an inspiration to further research and fruitful discussions.

On behalf of the Editorial Board of "Humanities and Social Sciences" we would like to thank the Authors for sending the outcomes of their research. We would like to express particular gratitude to the Reviewers for their valuable feedback that greatly contributed to increasing values of the scientific publications.

With compliments
Editorial Committee

Krzysztof CZUBOCHA[1]

EU CORE AND PERIPHERY: APPLICATION OF STRATIFICATORY DIFFERENTIATION THEORY TO EUROPEAN INTEGRATION

This paper brings sociology to European integration. The author claims that even though the European Union is a unique entity, it can still be analyzed in the framework of international relations. Therefore, the sociological theory of stratificatory differentiation can be applied to European integration. From the formal point of view, all EU member states are equal and remain sovereign actors in international relations; the EU is conceptualized as a network organization. However, this paper concludes that there is an unofficial stratification in the organization based on cultural and economic differences. Western core EU states (France and Germany in particular) constitute the higher stratum; the new (post-communist) member states occupy the subaltern status. The tentative claim of the author is that this unofficial stratification results in a differentiated impact of EU policies on the interests of EU member states.

Keywords: EU integration, stratificatory differentiation, international relations, EU eastern enlargement, neoliberal capitalism, EU foreign policy.

1. INTRODUCTION

From formal point of view the principle of sovereign equality governs the relations between EU member states. It is frequently stressed that the EU is composed of states treated as equal partners who take decisions on the basis of negotiations and as a result, the interests of all states are taken into account to the same degree. This approach is difficult to reconcile with the realist approach in international relations. Sociologists can provide interesting insights into the problem applying differentiation theory in its stratificatory form. International society is differentiated functionally into politics, economy or law. Segmentary stratification relates to tribes, nations and states. Stratificatory differentiation refers particularly to relations between empires or great powers and the rest of international community (Albert et al., 2013).

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"Stratification relates to a structure of social relations differentiated into categories of super- and subordination". Stratification may result in creating hierarchies. Hierarchy, in turn, refers to a form of rule. It is a governance relation in which authority allows the top states to restrict the autonomy of states occupying lower tiers. Substantial inequalities between states with reference to economic, military and symbolic power result in differentiated impact on the course of events (Viola, 2020b). Hidden hierarchies can be created within international organizations as a result of which states are able to influence other states or even in extreme cases control them unofficially. As a result, worldwide and regional centers and peripheries are created. Central states are regarded as more advanced than 'backward' peripheral ones. Structural and symbolic violence is frequently applied to influence weaker partners.

This paper claims that the sociological notion of stratification can be applied to international community and international organizations, including the EU. The aim of the paper is to analyze the process of EU enlargement and internal stratification within the EU with due regard to Central and Eastern European Countries (CEECs). The tenets of stratificatory differentiation theory will be tested by analyzing the eastern EU enlargement process and EU foreign policy.

2. MAIN TENETS OF STRATIFICATORY DIFFERENTIATION THEORY

Sovereign equality is a strictly legal and formalistic concept. The term sovereignty means a potential ability to act independently in international relations. However, in reality, open or hidden hierarchies are created with the strongest states on top. European integration studies have a lot to gain from thinking in terms of stratificatory differentiation theory. Sociological theories referred to such inequalities between states in the past. For instance, the distinction between core and periphery is central to dependency theory, historical sociology, international political economy, or World-systems theory which claim that there are centers and peripheries of global capitalism (Albert et al., 2013).

Historically, the modern international system was created as a result of the Westpfalian peace which stipulated that the Roman Emperor had no authority over German states. This rudimentary international community was widened and included new members on condition of adopting the rules of 'civilized nations'. The system was based on insiders (European powers) and outsiders (mostly Asian states). Belonging to the system potentially gave advantages in the form of recognition and protection against an invasion on the part of European great powers (Farr, 2005).

In the course of time it turned out that the insider status did not necessarily protected or gave equal rights. Internal stratification was created within the system. Even in Europe in the 19th century countries were divided between great and small powers and the former ones governed the system. States were differentiated on the basis of 'civilization', degree of development, or national power. Great powers assumed responsibility to manage the system in the 19th century (Viola, 2013).

The same rules exist nowadays. For instance, in the UN system special rights were granted to great powers forming the UN Security Council. In contemporary international organizations inequalities between member states of an organization are quite common. They are often based on voting rights which is are derived from the population or GDP of states. Therefore, the adhesion to the system does not guarantee equal access to governance or resources (Viola, 2020a). In case of the EU, informally, the trusteeship of the

organization was assumed by the Franco-German axis which is often labelled as the driving force of European integration (Hendriks, Morgan, 2001).

R. Taras points out that stronger states may label weaker states in international relations, imposing on weaker states their own opinions. Currently instead of labeling them as less civilized, referring to democracy or human rights is preferred. In this manner, a hierarchy of prestige is created in international relations (Taras, 2013, pp. 1-2). The strongest members of institutions can reprimand the states which are transgressors even though all members are formally equal. Smaller states who oppose great powers can be discursively delegitimized in an effort to force them to abide by the rules (symbolic power). In this manner internal inequalities within the system are upheld and reproduced. With this respect (Viola, 2020b) writes:

> Another way in which core states exclude or marginalize other recognized insiders is to discursively delegitimize them. By arguing that certain actors are no longer 'like us' because they abide by alternative norms or goals, insiders can be effectively excluded or marginalized. This happens when non-compliant insiders are recategorized as distinctly 'other' through labels such as 'pariah', 'outlaw', 'recalcitrant', or 'rogue' state […] These labels signal that a member has gone wayward, that it is no longer fulfilling the collective norms and is threatening the stability of the system.

To sum up, both the international system and international organizations often do not provide for equality even nowadays. They are often not neutral but rather the arenas of power struggle. As a result, the distribution of resources and privileges connected with membership is not equal. The inclusion of new states creates incentive for core players to create new forms of hierarchy and in order to retain their status of rule setters who govern the system. The new and weaker actors are mostly rule takers who are dominated and occupy the peripheral status. International organizations enable cooperation and problem solving but on the other hand they contribute to the creation of a stratified system of political equals and unequals. The coexistence of equality and hierarchy is a constitutive feature of the international system and institutions (Viola, 2020b).

3. CULTURAL UNDERPINNINGS OF WESTERN EUROCENTRISM

From theoretical point of view several theories were advanced to explain the lingering Eurocentric attitude of the West. These theories include orientalism and post-colonial theory which are complemented by theories providing geographical boundaries of cultures advanced by Huntington and Balibar.

After the collapse of communism Western powers were able to construct the world in their image. It applied to democracy, human rights and economic liberalism. In civilizational terms, post-communist EU candidate states were constructed as not entirely European. They were 'othered' or Orientalized in the framework of the remnants of Western eurocentrism. It is pointed out that the formation of Western European identity since the 16th century was done by distancing itself from the cultures of the East. The West was supposed to be, progressive, civilized and even biologically superior and the East was labelled as backward, irrational and racially inferior. For the first time, the above mentioned issues were analyzed more extensively by E.W. Said. The author states that the legacy of

Orientalism remains alive in Western Europe to this day also on scientific grounds. Orientalism still remains not only an academic tradition, but it also influences the perception of the East by state governments or international business (Said, 1979, pp.201-204). This is summarized by Skórczewski (2009) in the following way:

> In order to consolidate its optimistic image as the embodiment of the Enlightenment ideals of progress, the West "needed" a less developed, uncivilized, backward and immature Other, whom it had to properly represent and name, and thus endow with the identity assigned to it. The "invention" of this "Other" was a consequence of the discovery of the perfect matter for its creation, provided by the "peripheral" areas, stretched between Germany and Russia and covering territories from the Baltic Sea to the Balkans (with minor exceptions, such as Austria). The West accomplished this "invention" with the pens of its enlightened thinkers: Fichte, Herder, Voltaire, Rousseau, followed by others – diplomats, thinkers, scientists, travelers and writers.

From geographical point of view the works of S. Huntington and E. Balibar are important. E. Balibar points to the existence of concentric circles in the practice of European integration, according to this concept, Western Europe is considered the cultural center of the continent. The farther to the east the more the cultural distance from the center increases, that is, the distance from the center indicates the degree of civilizational development of the region (Balibar, 2004).

S. Huntington (1993), in turn, drew a dividing line between Western and Eastern cultures based on religious affiliation (Russia remains outside the circle of Western civilization). The countries of Central and Eastern Europe were considered sufficiently developed to qualify for EU membership after undergoing a process of socialization, while the post-Soviet space was considered foreign to Europe i.e. ineligible for participation in the structures of the West (Ukraine, Russia). The latter two countries already belong to a separate civilization, according to Huntington. There are also differences between Poland, the Czech Republic, Slovakia and Hungary and the Balkans (Romania, Bulgaria). The Balkan states had difficult access to EU structures because they remained for a long time under the domination of Turkey and were therefore associated with the East and all its negative characteristics. Although the Baltic states belonged to the post-Soviet space, S. Huntington counted them as part of European civilization (Boatca, 2013). Thus, it turns out that the access to EU membership was quite closely correlated with the Eurocentric concept of the backward East and the boundary between Eastern and Western cultures drawn by S. Huntington. The conceptions of Europeanness and the practical dimension of European integration were created by state governments and EU institutions on the basis of the proximity of a region to European cultural centers.

Some conceptualizations of the EU classify it as an empire. According to its own narrative the EU uses its power and leverage to shape their sphere of influence contributing to the spread of such universal values as democracy, free markets and human rights. On the one hand, unfavorable views of the EU hold that the EU controls its peripheries in the same way as ancient empires. The relations between the EU core and its peripheries are not equal

as the organization enforces also unofficial rules on the basis of its alleged cultural superiority with the aim of promoting its economic interests[2].

4. STRATIFICATORY DIFFERENTIATION THEORY AND THE EU EASTERN ENLARGEMENT

Stratificatory differentiation theory states that organization insiders are better positioned than applicants for institutions are not neutral arenas but sites of power and even dominance. The unequal status of insiders and outsiders resulted in forced integration of the CEECs into the EU by way of external governance. On the basis of the indicated cultural divisions and their subconscious application in the practice of the European integration process, the West believed that it had embarked on a great civilization mission, the overriding principle of which remains "the West knows best". The source of this approach was the tradition of Western eurocentrism, which in the past set itself the goal of a civilizing mission in the countries it colonized. As a result, the West approached the candidate countries in a paternalistic way Orientalizing them (Hooper and Kramsch, 2007) and treating as a repository of Eastness (Covacs, Kabachnik, 2001; Kuus, 2006).

As a consequence, the EU adopted the concept of returning to Europe the candidate countries from Central and Eastern Europe. These countries were to undergo a process of socialization into Western superior values (Europeanization). In legal and institutional terms, this process had to take place before accession. The candidate countries were faced with higher requirements in this regard than Spain, Portugal and Greece. In the early stages of integration, the candidate countries often experienced the phenomenon of idealizing the West, which resulted in unopposed compliance with Western integration plans and resulted in a teacher-student relationship.

J. Böröcz claims that in consequence of this approach to European integration the EU concluded asymmetric association agreements with the candidate countries which awarded greater benefits to EU member states (Böröcz, Sarkar, 2005).

The conditions for economic integration were imposed on the countries of Central and Eastern Europe and were not negotiable (exceptionally, transition periods could be obtained). Thus, the rules of the EU's economic field were imposed from above (impositional Europeanization) (Jakubek, 2008). For example, financial deregulation mainly promoted the interests of the largest financial institutions in the world, which were concentrated in the United States and the richest countries of Western Europe. Liberalization took place in areas beneficial to the EU (e.g. financial markets) and not in areas important to the candidate countries (e.g. labor market liberalization). As a result, the workforce from the candidate countries had to wait for labor market liberalization around 20 years from the signing of the association agreements, and labor markets for workers from EU member states were opened immediately. As a result of the shock therapy, candidate

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[2] See edited volumes: *Empire's New Clothes: Unveiling EU Enlargement* (2012). J. Böröcz, M. Covacs (Eds.), Telford: „Central Europe Review" [Access: 15.08.2022]. Access on the internet: http://aei.pitt.edu/144/1/Empire.pdf. *The European's Burden: Global Imperialism in EU Expansion* (2006). Engel-Di Mauro, S., ed., New York: Peter Lang Publishing. The problem of economic core and periphery is raised by several theories. For example: Wallerstein, I. (2005). *World-systems Analysis: An Introduction*. Durham: Duke University Press. See also edited volume, *Theories of International Relations* (2005). S. Burchill, A. Linklater, R. Devetak, J. Donnelly, M. Paterson, C. Reus-Smit, J. True (Eds.), Houndmills: Palgrave Macmillan.

countries experienced a severe economic downturn losing around 20 per cent of their GDP. One should therefore talk about structural violence rather than integration on an equal footing which resulted in sealing the CEECs middle income and peripheral status within the EU (Böröcz, Sarkar, 2005).

There exists extensive literature on the performance of transition economies from the 1990's onwards. The general conclusion is that those economies which joined the UE have been closing the development gap. On the other hand, there was no convergence at least until the eastern enlargement. Between 1989 and 2003 the CEECs' economies grew by 21 per cent whereas the EU-15 economies grew by 32 per cent (Kornai, 2006). Between 1989 and 1998 the majority of the CEECs' economies contracted (with the exception of Poland, Slovenia and Slovakia) (Cai et al. 2003). Another problem pertains to the structure of their economies. B. Farkas (2011) argues that the result of the economic transformation is the creation of another model of capitalism in the new member states which is characterized by asymmetric interdependency as a result of a pernicious division of labor. The transition economies are complementary to EU core economies and perform mostly low value-added and labor intensive activities, such as assembly. As a result, in the CEECs a dependent capitalism evolved (Nölke, Vliegenthart, 2009). Referring to the transformation Neunhöffer et al. (2006) write about 'questionable results'.

The candidate states were treated as outsiders which determined the economic results of the eastern EU enlargement. The rules of integration were hardly negotiable and the applicant states were rule takers. The candidate states were subjected to EU rules but they did not reaped the benefits of membership for over ten years. This transitional period resulted in exacerbated economic and social problems for the candidate states. Therefore, one can conclude that the period of preparation for EU membership brought more benefits for EU member states than the candidate states which corroborates the main assumptions of stratificatory differentiation theory.

In spite of the fact that the results of the economic transformation of the new member states are mixed, Western scientists, politicians and 'eurocrats' are still convinced that the civilizing mission was successful and that it at least significantly accelerated the modernization of the CEECs'. The external governance of the candidate countries during this process is considered to be right, which suggests that these states would not be capable of modernizing on their own.

5. APPLICATION OF STRATIFICATORY DIFFERENTIATION THEORY TO EU FOREIGN POLICY

Stratificatory approach to international relations indicates that after the inclusion of outsiders into the system, they retain their underprivileged status. After an expansion the most important powers aim at recreating stratification and exclusion to lower the costs of expansion. This time insiders are divided on the basis of common interests which means that states not aligning with great powers are excluded from sharing the benefits of membership. "Empirically, the three types of goods provided by inclusion in the international system – existential, governance and substantive – are not equally distributed among members" (Viola, 2013).

Stratificatory approach to European integration indicates that after the inclusion into the EU, the status of CEECs improved as they were entitled to the same treatment under EU law. However, core member states created new and often unofficial rules of exclusion which

resulted in the creation of internal stratification within the EU. This phenomenon will be exemplified by analyzing EU foreign policy in connection with two different geopolitical 'mental maps' of its member states.

EU foreign policy is carried out mainly within the legal framework created by the Common Foreign and Security Policy (CFSP) which was introduced by the Treaty of Maastricht. EU foreign policy also includes European Security and Defense Policy. However, foreign policy should be treated more broadly. According to S. Keukeleire and J. MacNaughtan (2008) the term EU foreign policy should encompass such issues as trade, human rights, democracy or development policy.

Classical geopolitics has been criticized for the lack clear connection between geography and the power of nations. It has been stressed that even if such correlation existed in the past, nowadays it nearly disappeared as a result of modern technology. However, Geopolitics has been evolving and now it encompasses numerous fields of research. One of them is 'mental maps' of national elites which determine national foreign-policy goals. The most important of them is the conception of land powers opposing maritime powers. In other words, the Anglo-Saxon world represents maritime powers and it is opposed by Asian states as land powers (Sykulski, 2014). The EU has been divided over the affiliations of its member states. CEECs countries are afraid of Russia and as a result these countries pursue the transatlantic agenda. The Franco-German axis formally adhere to the transatlantic alliance. On the other hand, they are attracted to Asian land powers due to their economic importance. What is more, some elites of France and Germany claim that these countries should shed the American dominance as they would be better off creating Paris-Berlin-Moscow axis which would be extended to China or Shanghai (Grossouvre, 2002; Heins, 2006; Czubocha, 2013).

These diverging geopolitical conceptions constitute one of the major obstacles to creating a common EU foreign policy. Namely, most new EU member states viewed the Russian Federation as a security threat and as a result they pursued their Atlanticist agenda. On the other hand, the Franco-German axis aimed at creating an alliance with Russia which would be a counterweight to American unilateralism (Dinan, 2005; Czubocha, 2013; Piccardo, 2010).

First important clash took place in connection with the Irak war in 2003. Several months before the accession of CEECs into the EU. The Franco-German axis opposed the American invasion and the new member states supported it. French president, Jacques Chirac remarked undiplomatically that "these countries have been badly brought up" and they "missed a good opportunity to shut up" (McNicoll, 2008).

After the eastern enlargement such conflicts lingered around the relations with Russia and always in connection with the role of the United States in Europe. Poland promoted the project of the Eastern Partnership with a view to bring Ukraine and Georgia to the EU and weaken Russia. From obvious reasons Germany was not interested in giving this project more importance due to its anti-Russian underpinnings. As a result, even though the Eastern Partnership materialized in 2009, it was never a priority for the organization as it would put in jeopardy the relations with Russia.

Problems related to energy supplies created additional conflicts within the EU. EU energy dependence on Russian supplies was perceived as a security threat by East-Central Europe whereas Germany intended to base its industry on Russian energy supplies. As a result, a conflict erupted over pipelines from Russia to EU countries. The aim of Poland was to force Russia to include Ukraine into the pipeline projects. It resulted in an agreement

between Russia and Germany to build the North Stream pipeline bypassing Poland. Poland was not able to block the project which made it potentially possible to cut off gas supplies to the whole region. The disagreements over the broader energy policy lingered for years and they were costly especially for Poland as the opposition towards German and Russian projects resulted in higher gas prices for Poland and attempts at presenting Poland as a non-cooperative state which blocks EU initiatives (Czubocha, 2009).

The strongest EU member states often treat EU foreign policy as an extension of their own national foreign policies (Pietraś, 2006). Within the European Union it frequently happens that smaller states change their position for fear of future retaliation on the part of the biggest EU member states (Gegout, 2010). On several occasions the new member states were reprimanded for not accepting the policy of the Franco-German alliance. The new member states are regarded as junior partners who should follow the advice of the biggest member states (it refers to the Franco-German axis in particular). Whenever the junior partners intend to express their own opinion and follow their own path against the will of the biggest EU member states, they are labeled as countries hampering EU integration for they presumably do not understand EU values. Thus, obtaining the status of EU insiders was not enough for East-Central Europe to achieve equal status with the core EU states.

To conclude, it is worth mentioning that from the point of view of international law the Russian aggression of Ukraine of 2022 vindicated the geopolitical conceptions of the new member states who viewed Russia as a security threat. Broader cooperation between the Franco-German alliance and Russia is no longer possible in the current circumstances and the reliance on Russian hydrocarbons turned out to be a problem. The claims made by the Western EU member states that the new member states undermined European unity acting as the American Trojan horse in the EU has turned out to be unfounded.

6. CONCLUSIONS

As a result, in view of the provided evidence, it can be stated tentatively that the EU is not exactly what it claims to be as the member states are equal only from formal point of view and as a result the interests of member states are served differentially. Formally equal EU member states are internally stratified occupying different places in the unofficial EU hierarchy. The organization includes core states (mostly France and Germany) and the lower tier is occupied by the new, post-communist member states. Relations between them are not entirely based on the rules stressed by the official EU narrative according to which: sovereign and equal partners jointly run EU affairs by way of negotiations, bargaining, serving the interests of every member state to the same degree.

The enlargement was carried out on the basis of the forced introduction of EU law and the neoliberal economic model which resulted in 15–25 per cent recession in the candidate states and their deindustrialization. Their economies recovered as dependent ones servicing the most advanced economies. The fact that the CEECs countries have been closing the development gap after the accession to the EU does not mean that they may join the core EU economies.

After the inclusion of the post-communist countries into the EU, the core states created new forms of exclusion and in consequence, internal EU stratification was exacerbated. The new member states supposedly failed to internalize EU rules or in other words they were not Europeanized to a sufficient degree. Non-cooperation on the part of the new member states triggers attempts at marginalization by discursive delegitimization. It involves

questioning their Europeanness or full internalization of EU values. Such problematic states are called undemocratic, not upholding the rule of law, or nationalistic. Non-cooperative EU insiders are recathegorized as 'others' Recalcitrant member states are given signals in this way that they put the system in jeopardy. Warning signs can be presented by EU institutions or member states' politicians. The European Commission may threaten the new member states with noncompliance proceedings or a suspension of structural funds. Currently Hungary and Poland are criticized for the lack of democracy and the rule of law.

These processes resulted in paternalistic attitudes towards the new member states and coercing them into following EU integration projects prepared in advance by the biggest partners, e.g. strategic partnership with Russia which involved energy projects. The practice of EU decision making indicates that the interests and benefits of the biggest EU players take precedence over the concerns of the new member states. It refers both to economic and foreign policy issues in the framework of broader geopolitical and geostrategic considerations. Geopolitics created one of the most important rifts within the EU. The Franco-German axis aimed at creating a special partnership with Russia. The new member states, in turn, pursued their Atlanticist agenda for which they were reprimanded on several occasions. Therefore, the portrayal of the EU as a network without clear governing centers is only partially true as mutually beneficial cooperation does not explain in its entirety the functioning of the organization.

On the other hand, it is debatable whether the post-communist states would be better off today without participating in the European project. Uneven distribution of membership benefits does not preclude gains for peripheral states. It would be difficult to calculate the real benefits of EU membership as the results depend to a degree on the choice of indicators, methodology and the length of the sample period. One can argue that even the subordinate status within the UE brings more benefits than staying outside the organization. It is not clear whether the CEECs states would have been able to achieve a higher rate of economic growth and development without EU membership. In case of choosing their own development path, they might have descended into oligarchic political and economic systems which would have dampened their development prospects. Another problem is connected with trading partners. These countries lacked the clout of China and therefore, it is not obvious whether the EU would have granted them access to its market on privileged terms. Difficulties connected with trade could have hampered the CEECs' economic development.

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THE SANITARY SERVICE OF SEMINARIANS OF THE SEMINARY IN PRZEMYŚL DURING THE FIRST MONTHS OF THE GREAT WAR (1914–1915)

The subject of this article is the fate of the seminarians of the Przemyśl seminary during the battles for the Przemyśl fortress in 1914–15. In the face of the approaching Russian army, they decided to serve as orderlies in military hospitals. This service was very demanding, due to extremely difficult sanitary conditions, and shortages of food, medicines, dressing materials, and so on. Information about the life and work of future priests during successive sieges of the fortress was included in the *Chronicle of the Przemyśl Seminary*. Lay people who stayed in the fortress during the siege also wrote numerous memoirs and diaries describing the work of seminarians and priests. Thanks to these materials, it is possible to learn how the seminary trained Roman Catholic clergy for the war, the medical preparation that was offered by the standard seminary training program, and, finally, how the seminarians proved themselves in the hour of trial.

Keywords: seminarians, Przemyśl seminary, Przemyśl fortress, First World War, military hospitals.

1. INTRODUCTION

The history of the Przemyśl fortress and, in particular, the battles that were fought in its area during the Great War have been, and continue to be, the subject of historical research, which has resulted in numerous publications and scientific studies. As a rule, the authors focused on strictly military and humanitarian issues. Memoirs and diaries of eyewitnesses: both soldiers and civilians (Ehrenburg, 2010; Lenar, 2005; Stock, 2014; Vit, 1995; Zakrzewska, 1916) are a valuable source of knowledge about military operations as well as daily life in the besieged fortress.

In this context, an interesting fragment of the wartime history of the fortress, which has not been described more extensively so far, is the religious ministry of the seminarians of the seminary of the Przemyśl diocese of the Latin rite in military hospitals. Information on this subject is contained in the Chronicle of the Seminary (found in the Archives of the Metropolitan Higher Seminary in Przemyśl). It is presented there from two perspectives:

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the first, that of the seminarians who remained in Przemyśl and shared the hardships of the siege with the inhabitants and soldiers, and the second, that of the seminarians who decided to leave the city and, in many cases, return to their homes (*Kronika*...). These accounts were written shortly before the resumption of seminary classes in October 1915.

2. PREPARATIONS FOR WAR

When, on 18 July 1914, the seminarians of the Przemyśl seminary were leaving for their holidays, they could not have imagined that this time the break in their studies would last as long as fourteen months. The reason was the outbreak of the First World War.

The military importance of Przemyśl meant that preparations for battle were made almost from the start. Work was carried out on a huge scale in and around the city. Shooting trenches were dug; shelters and reserve depots were erected; artillery positions, also barracks for the army, warehouses and field bakeries were built. Minefields were prepared in strategic places; two additional bridges were built over the San River, and a military airfield was set up near Przemyśl. In order to clear the foreground, forests around the forts were cut down, local residents were displaced, villages and hamlets were burnt. What is more, wagons with supplies were constantly arriving in the town. The displacement also included the inhabitants of Przemyśl itself. Preparations were completed at the end of August. The failures of the Austro-Hungarian army in subsequent clashes with the Tsarist army caused chaos also in Przemyśl. More and more casualties were being brought into the city and a dysentery epidemic was spreading among the soldiers. For the first time, the shortage of food and other supplies became a problem. In this situation, the authorities issued another order to evacuate the civilian population. The refugees were left with an open road towards Kraków (Różański, 1983).

Thanks to the decision of the rector of the Przemyśl seminary, Rev. Teofil Łękawski (1834–1923), who instructed it is possible to learn about the fate of the seminarians during the siege of the fortress (*Kronika*...: *Nekrolog*...).

At the end of July and the beginning of August 1914, when more countries were entering the war, many seminarians came to Przemyśl. They wanted to learn how they should respond to the call to arms they received from the army[2]. According to the chronicler's account, although such calls sent by post resulted merely from error, many clerics applied to the fortress command for admission to the fortress hospitals as nurses, in order to protect themselves from being drafted into the army in this way. These requests were approved and as early as 2 August 1914, more than half of the students – 80 (10 to each of the eight fortress hospitals) – were called up for medical service. It is worth noting that it was left to the seminary authorities to decide which of the seminarians would be sent to such service. After the list had been drawn up, summonses were sent out to the selected ones via the parishes on 4 August (*Kronika*...).

Nevertheless, such willingness on the part of the seminary community to work on hospital beds was not surprising. In the chronicle cited above, the date of 25 November 1912 bears reference to the fact that the mitered prelate, Rev. Łękawski, had sent the authorities a list of his subordinates who had volunteered to serve in the lazarettos in the event of war. Regardless of the underlying reasons, specialist training was organised quite

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[2] Candidates for priesthood were exempted from military service; see also § 31 of the law of 11 April 1889 on the introduction of a new law on military service (Journal of Laws No 41, with further amendments).

quickly for the seminarians. The first lectures took place on 6 February 1913, just before the start of the winter examination session. These classes were conducted by General Bronislaw Majewski (1853–1934) – the army's chief sanitary officer (Stawecki, 1994). In addition to theoretical knowledge, the participants of this course were given a tour of the military hospital at Dobromilska Street in Przemyśl, as well as practical classes, which included, among other things, applying bandages and giving first aid to the wounded. The last so-called 'hospital orderly lecture' took place on 6 March 1913, after which the seminarians again went to the hospital. As the chronicler reported: "[we viewed] the operating theatre, the tools used to sterilise robes and operating instruments. Here we found twelve first-year schoolmates who took part in the operation indirectly. From then on, every Tuesday and Thursday afternoon, groups of twelve seminarians went in their turn to the operating theatre – until Easter" [translation mine – P.D.] (*Kronika...*)[3].

With the preparations for war, many of the buildings located in Przemyśl were used for military purposes, which also happened, among others, with the seminary's headquarters, converted into a recruitment post. It usually housed 140 seminarians; still, during the mobilisation some 1,500 people were accommodated there (Ślemp, 2005). The chronicle of the seminary reads: "The new inhabitants were, however, better economists than us in the way they exploited space, and so they not only occupied all the rooms so that the smallest room, where one cleric normally lived, housed six recruits each – but all the corridors were covered with straw, on which the recruits lay side by side in such a way that their heads were on the side of the windows and the legs, especially of the mediocre ones, touched the opposite wall. Since the new defenders of the fatherland did not recognise the difference between day and night and lay on their bedding all day, it was only possible to cross the corridor by jumping over each recruit's legs" (*Kronika...*). It is noteworthy that the military authorities left several rooms at the exclusive disposal of the rector and vice-rector, a servant, a gatekeeper and 7 seminarians.

3. SEMINARIANS' ACTIVITIES IN THE LIGHT OF AVAILABLE ARCHIVES

The clerics referred to Hospital No I were the first to arrive in Przemyśl. This was due to the fact that they were supposed to report to the headquarters of their hospital as early as on 11 August. The others arrived in the city a few days later. The seminary building, apart from being converted over time into a hospital, or more precisely the 3rd ward of Hospital No. IV, was for some time also the place where seminarians serving in other establishments would be served meals. The tasks that were assigned to them depended on the facility to which they were assigned and their superiors. Thus, some were in charge of bandaging the wounded, others distributed medicines or wrote down medical orders, and finally others were only on night duty (*Kronika...*).

In time, the seminarians started to reside next to the hospitals where they also were served meals. Quite soon, however, their number was halved; some left for home, some were transferred to other institutions[4]. The author of the second chronicle account

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[3] Easter in 1913 was on 23 March.

[4] Those remaining in the medical service were: Michał Buniowski, Kazimierz Kuźniarski, Michał Pelczar, Józef Kosowski, Jan Lorens, Bolesław Hołub, Franciszek Misiąg, Jakób Nigburowicz, Wojciech Porada, Julian Beck, Jan Guzy, Władysław Opaliński, Stanisław Wanat, Józef Żela-zowski, Paweł Paśko, Józef Świdnicki, Władysław Wójcik, Antoni Baszak, Roman Głodowski, Franciszek Kusy, Stanisław Matyka, Andrzej Niżnik, Ludwik Wielgosz, Jan Dziedzic, Władysław

(mentioned in the introduction) explained the whole situation: "after a few weeks, just before the first siege, many of the seminarians (with the permission of the sanitary authorities) discouraged by the ill-treatment and treatment as simple 'mannschaft' returned home" [translation mine – J.D.] (*Kronika...*). The clerics assigned to Hospital IV, or more precisely to the seminary, had relatively the best fate of those who stayed as they were able to lead a truly seminary life, including, among other things, attending daily Mass celebrated by Rev. Rector Łękawski. For the others, fulfilling religious practices entailed many difficulties.

September 1914 saw a general retreat of the Austro-Hungarian army, resulting from the fall of Lviv[5] and the collapse of the offensive towards Lublin. These events caused the front to shift to the San line (Kuca). The Austrian High Command moved from Przemyśl to Nowy Sącz, while General Kusmanek was ordered to defend the fortress 'to the last resort'. In preparation for fighting the Russians, the wounded and families of officers were evacuated, and auxiliary bridges over the San River were blown up. The troops that remained in the fortress were put on high alert (Różański, 1983).

Przemyśl was besieged by a Russian force of 280,000 soldiers. The fortress was completely cut off from the world on 26 September. However, the start of the siege did not carry any serious threat to either the defenders or the civilian population. The Russians focused on building infantry positions and artillery positions on the outskirts of the city and did not respond to the defenders' shelling. The city became overpriced and food rationing began. A number of prohibitions were introduced, including leaving homes, holding gatherings and meetings. To maintain order, severe punishments were applied even for minor offences. Death sentences were carried out almost daily for espionage, but also, for example, for theft (Różański, 1983).

The Russian commander-in-chief intended to take the fortress by storm. However, he did not have the heavy artillery to significantly support these plans. The Russian assaults that followed on 5, 7 and 8 October 1914 did not have the intended effect. What is more, already on 9 October the blockade of the fortress was broken, as a result of which the besiegers were forced to withdraw to a distance of a few kilometres east of Przemyśl (Różański, 1983).

This was an undoubted success for the Austro-Hungarian troops. However, it was obvious to the command that the Russians would soon attack again. The authorities therefore called for the evacuation of the civilian population, whose presence was not necessary. At the same time, the fortress garrison was increased to 135,000 soldiers.

The expected siege began on 9 November 1914. This time, the fighting on the outskirts of Przemyśl took the form of positional warfare as the Russian command decided to change tactics, deciding on a full blockade of the fortress to force its defenders to surrender by starvation. In response to this, General Kusmanek ordered to carry out raids on enemy positions. The aim of these actions was to maintain a permanent state of threat among the besiegers, but also to identify the number and deployment of enemy forces by means of military activities.

Wyderka, Karol Złotek, Józef Borcz, Teofil Górnicki, Władysław Piotrowski, Michał Poprawski, Piotr Gałęza, Jan Wołek, Marcin Puć, Leon Czajkowski, Wojciech Dzioba, Ludwik Grabowski, Jan Kochman, Jan Michułka, Tadeusz Murdza, Stanisław Cyran.

[5] Lviv was occupied by the Russian army on the night of 3 to 4 September 1914.

Despite these actions by the defenders, there was no prospect of an imminent change in the situation. Driven by the welfare of the clerics remaining in the city and not wanting them to lose a year of study due to the war, Rev. Łękawski considered organising lectures. Among the many problems that stood in the way of these intentions, one of the most significant was the lack of teaching staff. Indeed, at that time, only Rev. Dr. Wojciech Galant (1853–1930) (Śliwa, 1983) and Rev. Dr. Teofil Chciuk (1875–1936) remained in Przemyśl (Krzyżak, 2017; Nabywaniec, 2021). However, it was decided to ask for help from other priests so that just after the New Year the teaching could begin. Before these plans were implemented, the seminarians, like other inhabitants of the city, were preparing for Christmas. This was particularly evident in the hospitals where they worked. A chronicler recalling these moments wrote: "In the hospitals they were in a hurry to give sick soldiers a Christmas party, in such a way that a Christmas tree was put up in each of the larger rooms or everyone was gathered into one larger room, which was the case, for example, in my ward. They placed a Christmas tree on the table, lit candles and waited for the arrival of the head of the ward, who soon arrived with nurses, medics and orderlies and made his wishes in German, which were repeated in all languages by various interpreters. The Hungarians then sang a Hungarian carol to the accompaniment of a gypsy's violin [...] and when the doctor expressed his wish for a Polish song to be sung, the Polish national anthem rang out in Hungarian. Soon [...] a mighty voice, *Silent night*, echoed against the ceiling of the room, much to everyone's delight" [translation mine – J.D.] (*Kronika*...). After breaking the wafer, the seminarians went to the seminary building, where a Christmas Eve supper with traditional borscht and apple cake awaited them. Rev. Józef Stachyrak (1868– –1954), the vice-rector, addressed the gathering (Zych, 2011), encouraging them to be dedicated in their work for the sick and to fulfil their religious practices as zealously as possible, despite the difficult conditions. Carols resounded around the table. Seminarians, serving in different hospitals and thus having rare opportunities to meet, were finally able to tell each other about their experiences. The conversations, already held in the chambers, continued until after midnight (*Kronika*...).

Working in the fortress hospitals was extremely demanding for all the staff. For the clerics, who had received only basic medical training, it must have been particularly difficult. After all, the young, inexperienced men were, for the first time, confronted with the horrors of a new war that produced casualties on an industrial scale. They were certainly shocked by the prevalence of death, the number of wounded and the nature of the mutilations. What is more, the patients were generally their peers. In the course of their service, the alumni were eyewitnesses to countless human tragedies. They also risked their own health and even their lives working in the wards for infectious patients. This was compounded by a permanent shortage of anaesthetics, dressings and medicines. These problems were also pointed out in her diary by Helena Jabłońska (1864–1936), née Seifert, an administrator of several tenements in Przemyśl (Jabłońska, 2017; Piekaniec, 215).

To all the problems faced by the Przemyśl hospitals, one must also add their extraordinary overcrowding. This is confirmed by the following data: the number of patients hospitalised on 1 December 1914 amounted to 4879, on 1 March 1915 to 10581, and on 10 March already to 12140[6].

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[6] T. Idzikowski; data included in the paper entitled *Lazarety w Przemyślu latach 1914–1918* [Lazarettos in Przemyśl in the years 1914–1918]*, delivered as part of the conference *Military Lazarettos in the years 1914–1918 on the path to independence* – Przemyśl, 15 November 2018

In accordance with the Rector's plans, lectures for the fourth-year seminarians began on 8 January 1915. They were conducted by Rev. Jakub Federkiewicz (moral theology) (Śliwa 1983a), Rev. Józef Stachyrak (rubrics), Rev. Dr. Wojciech Galant (pastoral theology), Rev. Dr. Teofil Chciuk (law) and Rev. Teofil Łękawski (catechetics). These classes were held in the Rector's dining room. A few days later, lectures for the second year began. The teaching, however, could not have the usual level of intensity. This was due to the lack of time, as the seminarians were mainly focused on hospital work, but also to the scarcity of paraffin used for lighting. Clerics assigned to the seminary, where the army, presumably anticipating a shortage of this fuel, installed electric lighting, were in a slightly better situation. However, in spite of these obvious difficulties, the seminarians always willingly attended these lectures, especially as both the rector and the other professorial priests were understanding towards them and did not spare them words of encouragement to persevere (*Kronika*...).

Frost of extremely low, almost Arctic, temperature appeared at the end of 1914 and the beginning of 1915. The fortress began to run out of food. The problem was so acute that both soldiers and civilians attempted to save themselves by hunting birds and, subsequently, also dogs and cats. The skins of the latter were also used to insulate uniforms. The fortress had about 14,000 horses. The shortage of fodder and numerous diseases in these animals hastened the decision to send them to slaughter. The meat obtained in this way was used to improve the alimentary situation of the fortress.

An extremely significant problem throughout the city was the dire sanitary conditions – the result of a lack of drinkable water and a poorly functioning sewage system. It is therefore not surprising that infectious diseases, including cholera, but also typhoid and dysentery, began to appear in the city fairly quickly and over time assumed epidemic proportions.

The morale of the defenders as well as the civilian population was also negatively affected by the lack of reliable information about the situation at the front and the rumours that appeared instead.

4. FALL OF THE FORTRESS

The position of the defenders worsened considerably when the besieging Russian troops were finally retrofitted with heavy artillery, which from mid-March inflicted serious damage to the fortress buildings and disorganised the Austrian artillery. In this situation, General Kusmanek decided to attempt to break the siege. However, the action taken on the night of 18–19 March 1915 ended in failure. As a result, the command was forced to surrender the fortress. Przemyśl capitulated on 22 March 1915 after 137 days of siege. On that day, Russian troops began to enter the ruins of the fortress from 10 a.m. (Różański, 1983).

The day of the surrender was immortalised e.g. in the seminary chronicle. Its author wrote: "As the population of the city was ordered to leave their homes before dawn and go to safer places, a large number of people gathered on the Tatar Hill and on Węgierska Street and waited anxiously for what was going to happen. Soon we heard one explosion, another, etc., then all the bridges and the powder magazine were blown up – then the Duńkowiczki fort, the Siedliska fort and others were blown up, so that columns of fire and clouds of smoke appeared in more and more directions. Around 8 o'clock in the morning I saw on

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[Access: 18.08.2019]. Access on the internet: https://przemyska.pl/2018/11/17/przemysl-wojskowe-lazarety-w-latach-1914-1918-w-drodze-do-niepodleglosci/.

Grunwaldzka Street the first detachments of Russian cavalry moving in, at first one by one, then more and more crowded, and soon the whole street was filled with cavalry [...]" [translation mine – P.D.] (*Kronika*...).

Under the new government, the sick remained in the hospitals, as did the doctors and auxiliary staff working there, including clerics. The only change was the periodic inspections of these facilities by Russian officers and Russian guards.

Soon after the occupation of Przemyśl by the Russians, Easter was celebrated[7]. The seminarians staying in the city gathered in the seminary building. Rev. Łękawski addressed the gathering, who "presented the situation of the country and called for trust in God's help" [translation mine – P.D.]. After a festive breakfast, the seminarians returned to their usual duties at the hospitals. As it turned out, however, not for long. The following day – 5 April – the seminarians were relieved of their sanitary duties thanks to Bishop Karol Józef Fischer (1847–1931) (Śliwa, 1983), a visible sign of which was the order to return their red cross bands. However, all of them were not allowed to live in the seminary. Some were deployed in the building of the old gymnasium, others remained in their former flats. In these places, they awaited the rector's decision. However, the resumption of their studies posed many problems, food being one of them. Up to that point, the seminarians had eaten in various places in Przemyśl. Only some of them could be provided with food at the seminary, others were fed at the Ziemiański Orphanage and the Felician Sisters' Home in Zasań. Unfortunately, under the conditions of the time, there was no chance of improving this situation. A separate issue was the restrictions introduced by the Russian authorities. The competent authority had to be informed of the start of the course, and this would have entailed changing the language of instruction to Russian. The alternative was home training which consisted in instruction rather than lectures. Here, too, there was a major obstacle. The clerics, as already mentioned, lived in different parts of the city. The constant movement of a large group of seminarians would undoubtedly have eventually attracted the attention of the Russians. Infectious diseases, which were not uncommon in Przemyśl, were also an important issue. All these circumstances led the rector to decide to organise examinations of the material covered so far and release the seminarians to their homes (*Kronika*...).

As the days passed, however, Russian rule became increasingly brutal. In addition, the secret political police, the so-called 'ochrana', arrived in the city along with the army. The main task of ochrana was to track down opponents of the authorities. Its officers sought not only to recruit agents (informers) among the local population, but, thanks to their activities, to control all of social life. The censorship office also cooperated closely with the authorities and the police. Its representatives dealt with the control of texts printed in the local press, books, as well as the content of texts distributed in public, including advertisements and posters (Błoński, 2007). The changes that were taking place in Przemyśl also seem to justify the seminary authorities' decision to release the seminarians to their homes. The departure was by no means easy, especially as their future was in question. The chronicler recalled: "[Rev. Rector] bid us farewell and instructed us to trust in God that calmer times would come and then we would gather again to study. Then we went with the Rector to the chapel. Across the road the persistent thought fluttered through our minds that perhaps this was the last time we would be in the Seminary, perhaps the last time we would pray in the Seminary chapel, and so the more fervent prayer started flowing from our lips that God would confirm us in our

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[7] Easter 1915 was on 4 and 5 April.

vocation and allow us to gather in the Seminary for graduation. For the next few days, the seminarians made preparations for the journey and applied for Russian passes, and then travelled home mostly by freight trains, so that only a handful remained in Przemyśl around 3 May" [translation mine – P.D.] (*Kronika*...).

5. THE RECAPTURE OF THE FORTRESS

As a result of the Battle of Gorlice, the Russian front was broken in early May 1915. Subsequent defeats caused the Russians to hastily begin withdrawing from Przemyśl and the western part of the district. As early as on 3 June 1915, German and Austro-Hungarian troops began to enter the city. The city's inhabitants welcomed the conquerors enthusiastically: "Austrian flags appeared in the windows of many houses, and the population gathered along the streets threw flowers at the soldiers" [translation mine – P.D.] (Forster, 2000; Heiden, 2013; Idzikowski, 2014).

The recapture of the Przemyśl fortress was celebrated throughout the Habsburg monarchy. The front was moving further and further away and ‚consequently, life in the city began to look normal; tenements destroyed during the war were rebuilt, and institutions of public use were reactivated (Jabłonowska, 2017).

In June 1915, Bishop Józef Sebastian Pelczar returned to Przemyśl[8]. Almost immediately, he focused on initiating the recovery from the moral and material devastation left by the war effort (Śliwa, 1980). One of the priorities was the reactivation of the Przemyśl seminary. The academic year 1914/15 was lost for the alumni, but in order for them to be able to start the next one on time, they had to put the building in order beforehand, as well as to move the entire surviving book collection to its original place. This was, incidentally, enriched by items donated by Rev. Łękawski and other benefactors (Ślemp, 2005).

Another problem was the fact that the seminary building was listed in official documents as a hospital, despite the fact that it no longer contained any ill people at that time. Hence the formalities for its recovery were extensively prolonged and lasted until 10 July 1915. Even then, however, problems continued to pile up. The interiors had to be disinfected. This was necessary to ensure the safety of future residents, as infectious patients were housed in the seminary during sieges (*Kronika*...). Despite numerous difficulties, it was finally possible to bring the seminary's premises into a suitable state, so that regular lectures resumed on 3 October 1915. It is worth mentioning that after the turmoil of the war, a total of 119 alumni began their studies within the walls of this institution. Among them, those who, in the face of the approaching Russian army, decided to stay in Przemyśl, returned almost in full number (*Kronika*...).

6. CONCLUSION

The description in the seminary chronicle is probably the only evidence of the seminarians' involvement in saving the lives of wounded and sick soldiers during the battle for the fortress of Przemyśl. These young people, disregarding the daily hardships of a besieged city: hunger, disease, extremely difficult sanitary conditions and omnipresent

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[8] During the siege of the fortress, Bishop J.S. Pelczar was not in Przemyśl. He left the city on 21 September 1914, heading for Krakow. Before that, he had assigned a number of tasks to the clergy in the diocese. He specified them in a proclamation of 13 August 1914 (Pelczar, 1914).

death, faced this challenge at their own request. Even though they were assigned to carry out basic nursing or auxiliary duties, given the circumstances their attitude can be considered heroic, which makes their efforts all the more noteworthy in order to set an example of duty and devotion to ideals. The recapture of the fortress by the German and Austro-Hungarian armies, and thus the reopening of the seminary, did not mean for the future priests a definitive farewell to the army and the war. For some of them, ministering at hospital bedsides in 1914 and 1915 was only a harbinger of future service this time among Polish soldiers often on the front line.

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RESILIENCE IN THE CONTEXT OF THE SOCIO-POLITICAL SITUATION OF YOUNG ADULTS IN EUROPE

As the epidemiological statistics for anxiety disorders and mood disorders show, adult mental health has declined in recent decades, making the life of the average person more prone to adversity. Several worldwide sociocultural changes require people to be more flexible and adaptive to cope with modern life. Therefore, people's ability to cope with daily stress and care for their well-being remain important issues. An essential factor in enhancing and protecting mental health is resilience as an inner source and the capacity to face adversity. Resilience can be described as the competence to stay flexible and adapt to changing environments, even in an unfavorable habitat. As a capability, despite its importance, it is mostly described and explored in childhood populations, leaving a space for further investigations focusing on adults. The article aims to present some findings regarding resilience among young adults, as well as to emphasize the importance of resilience in adult life.

Keywords: resilience, early adulthood, mental health, 21st century.

1. INTRODUCTION

1.1. Early adulthood in the modern world

The relatively small interest of research is aimed at the period of young adulthood. That may be caused by the fact that this period is characterized by reduced dynamics in the field of neurodevelopmental and psychophysical changes when compared to the other stages of development. Increasing pressure on self-sufficiency and individuality in Western societies (Brzezińska, Syska, 2016), brings egocentrism in the place of the previous space for interest in other people.

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At the same time, the silent assumption of "coping" of an average adult can also contribute to the marginalization of adult problems. Self-sufficiency and individuality, which have become the key values of the XXI century, alongside evident benefits, such as the ability to choose and create an individual development path, also bring with them the risk of ignorance of the problems of adults.

Early adulthood especially is an incredibly intense period in terms of having to make critical decisions for the development and well-being of the individual. The decision making process is influenced not only by the personal aspirations and needs of the individual but also often by a sense of pressure resulting from family pressure and social expectations related to culturally defined adulthood criteria, i.e., entering the labor market and starting a family.

The observed tendency to postpone the fulfillment of these expectations as well as the dynamic changes that the picture of adulthood has undergone over the past few decades have made adulthood development period more popular (Brzezińska, Kaczan, Piotrowski, Rękosiewicz, 2011; Piotrowski, Brzezińska, Pietrzak, 2013; Piotrowski, 2013; Rękosiewicz, 2013).

1.2. Socio-cultural and political changes in adulthood

The last fifty years have been a period of significant socio-cultural changes that have had a significant impact on the adults' functioning (Brzezińska et al., 2011). Dissemination of higher education and extending life by as much as twenty years brought a significant shift in the time of taking important life roles. Rapid socio-economic changes caused by the unprecedented development of technology as well as social changes in the perception of marriage, divorce, parenthood, gender roles, and sexuality. That makes the realities in which adults live radically different from those in previous generations. Therefore, it seems that today's adulthood is far more dependent on its own than its predecessors.

This situation may have its source in the change that occurs in the cultures of Western countries – towards a prefigurative culture in which the order of socialization is reversed (Mead, 2000). The reality in which parents of current adults grew up is so different from modern realities that especially young people can benefit much less from previous generations than before. In turn, they do not understand the reality that surrounds their adult children, which is why they are not able to provide them with adequate support.

A characteristic feature of adults' life is variability and instability in terms of place of residence, work, relationships. Increased mobility of people not only refers to changes in the workplace and residence, but also finds expression at the social level – in the flexibility and variability of roles taken, as well as at the psychological level – in the variability of lifestyle and professed values, as well as the need to constantly adapt to changes and new trends (Ziółkowska, 2005).

The expanded field of exploration, permission to cross the cultural boundaries, conventions, and variability in the scope of preached norms and values, promotes the personal development of adults, expanding their own experiences and competencies without much restraint by rigid norms or requirements. At the same time, functioning in unstable employment conditions and higher than ever-changing expectations and relativity of preached values characteristic of contemporary society. Anthony Giddens (2001) described that as a 'risk society', which brings new threats.

In parallel with the development of possibilities, we observe an increasing level of individualization and loneliness. As Oleś (2011) notes, there is progressive atrophy of the

socially determined structure of the life course, 'a person loses clear reference points, which can give rise to uncertainty.' Career volatility, unstable relationships, and the need to continually adapt to unstable socio-economic conditions have an impact on the individual's identity. The research results (Oleś, 2011) indicate that the prolonged period of the moratorium significantly extends the identity crisis characteristic of the adolescence period. With the relativization of values and norms, anchor points for own identity become increasingly vague and susceptible to change, resulting in uncertainty and increased anxiety accompanying modern adults (Campbell, Assanand, Di Paula, 2003).

Furthermore, the war in Ukraine, which broke out in February 2022, caused one of the most important political and social problems in Europe after the Second World War. According to the United Nations, war may cause an economic tragedy not only in Ukraine and Russia, but also in most countries in Europe and Asia.UN Secretary-General AntónioGuterres (2022) warns of the threat of a food, energy and financial crisis.Currently, young adults live in times of high political and social instability.Moreover, they arealso struggling with the problem of instability of living.Due to the conflicts in Ukraine andother countries, the number of forcibly relocated has exceeded 100 millionfor the first time (UNHCR, 2022).It is an objectively difficult situation for all young people, who have been directly and indirectly affected by the crisis in Ukraine.

2. MENTAL HEALTH IN THE XXI CENTURY

As the World Health Organisation states, 'one in four people in the world will be affected by mental or neurological disorders at some point in their lives. Around 450 million people currently suffer from such conditions, placing mental disorders among the leading causes of ill-health and disability worldwide' (WHO, 2001).

Ritchie and Roser (2018), based on Global Burden of Disease Study (worldwide observational epidemiological study to date), estimated the general and more specific mental health disorder prevalence across the world. They apply specific definitions, typically following the ICD-10, and believe mental disorders remain widely under-reported.

In general, Ritchie and Roser (2018) report that around 13% (11–18%) of the global population share of mental or substance use disorder, which gives around 970 million people with the disorder. More specifically, approximately 3,4% (2–6%) of the global population suffers from depression, which gives around 264 million people disordered. Approximately 3,8% (2,5–7%) of the global population suffers from anxiety disorders, which gives around 284 million people struggling with different types of anxiety. Approximately 0,6% (0,3–1,2%) of the global population has a bipolar disorder, which gives around 46 million people disordered. Approximately 0,2% (0,1–1%) of the global population suffers from eating disorders (clinical anorexia and bulimia), which gives around 16 million people disordered. Approximately 0,3% (0,2–0,4%) of global population share schizophrenia, which gives around 20 million of people disordered. Approximately 1,4% (0,5–5%) of the global population suffers from alcohol use disorder, which gives around 107 million people disordered. Approximately 0,9% (0,4–3,5%) of the global population struggle with drug use disorder (excluding alcohol), which gives around 71 million people disordered. Still, the data regarding the burden of mental disorders are underreported.

Mental illness is common and has a high prevalence. What is more, mental illness seems to increase in the last decades. This could be noticed, especially in the last decade in the early adulthood population (Twenge, Cooper, Joiner, Duffy, Binau, 2019). Very specific

issue related to mental health in the recent time is the pandemic of COVID-19 disease caused by the SARS-CoV-2 virus. The experience of global crisis as well as the fear and anxiety undelying each day of pandemic reality (Shanahan, Steinhoff, Bechtiger, Murray, Nivette, Hepp, Ribeaud, Eisner, 2020) makes people more prone to develope mental disorders. Of course the elderly suffering from the fear and isolation, especially in the beginning of the pandemic, may experience deterioration and setback (Grossman, Hoffman, Palgi, Shrira, 2021). But they are not the only ones, alongside of pandemic continuance, the research indicate that young adults also experience negative mental health outcomes (Gambin et al., 2021; Killgore, Taylor, Cloonan, Dailey, 2020; Sokół-Szawłowska, 2021; Talarowska, Chodkiewicz, Nawrocka, Miniszewska, 2021). They do suffer from emotional stress, security thread, loss, emotional isolation, post-traumatic stress disorder, anxiety and depression symptoms as well as obsesive-compulsive symptoms ans addictions (Chatterjee, Barikar, Mukherjee, 2020; Cullen, Gulati, Kelly, 2020; Fiorillo, Gorwood, 2020; Ornell, Schuch, Sordi, Kessler, 2020; Pfefferbaum, North, 2020; Shuja, Aqeel, Jaffar, Ahmed, 2020).

2.1. The meaning of resilience

Therefore there is a general need for prevention and early interventions in the light of high rates of depression and anxiety disorders. Resilience may be a construct that could aid and foster the XXI century people mental health. Resilience has many definitions. It may be defined as the ability to "bounce back or recover from stress, to adapt to stressful circumstances, not to become ill despite significant adversity, and to function above the norm despite stress or adversity" (Smith, Dalen, Wiggins, Tooley, Christopher & Bernard, 2008). It may also be described as a process of effective overcoming negative life events and bouncing back after stressful time (Borucka, 2011; Borucka, Ostraszewski, 2012; Masten, Powell, 2003; Ogińska-Bulik, 2011; Junik, 2011; Luthar 1991; Luthar, Cicchetti, Becker, 2000; Wright, Masten, Narayan, 2013; Venter, Snyders, 2009). Resilience can be understood as the ability to cope with stressful situations, dynamic and fast ability to "self-repair" and recovery after a threat, flexibility, or mental plasticity (Sikorska, 2016). In other words, resilience is a flexible response to changing situation and stressors (Ogińska-Bulik, Juczyński, 2008) and may be expressed by the terms: flexible, resistant, and resourceful (Junik, 2011).

Derived from the Health Psychology area (Heszen Niejodek, Wrzesiński, 2000), while combining knowledge of Social Psychology, Developmental Psychology and biological sciences, it includes both the disposable properties of the individual and the process of effective overcoming adverse life events (Borucka, 2011; Borucka, Ostraszewski, 2012; Masten, Powell, 2003, Ogińska-Bulik, Juczyński, 2008a, 2008b), and is also recognized as a developmental result (Sikorska, 2016).

Several transformations in the last decades led to the dynamic development of broad research on psychological factors for health and illness (Heszen-Niejodek, Wrześniewski, 2000), especially in the field of resilience. Some reasons are due to the diseases change types, and the death causes structure, as well as the psychological factors enhancing health evidence and importance. Not less significant is the rise in health care costs. In addition, an increase in people's aspirations to participate in solving their health problems is widely observed. All of those reasons resulted in the increase in the interest of positive health psychology factors research.

Resilience remains a significant factor in the mental health area. As Hu, Zhang, and Wang (2014) reported, the resilience correlates negatively to negative indicators of mental health and correlates positively to positive indicators of mental health. Thus, resilience performs a protective role in the populations' mental health. In literature and in the history of understanding the concept of resilience, a transformation is observable. From the homeostatic concepts, in which the essence is a return to equilibrium or an earlier state, to idealization concepts understood as growth, development, and exceeding the level that was reached before the imbalance (Sikorska, 2016). Important concepts cited by the author are a vulnerability, risk factors, protective factors, stress, coping and mental resilience.

2.2. Different approaches to resilience

As the American Psychology Association (APA) claims based on the research results, resilience is ordinary, not extraordinary – in general, people tend to be resilient. Furthermore, people can learn how to be more resilient, to make one's life more stress- and adverse event resistant as well as to promote well-being. In the search for the key factors that can change adults' life quality, APA indicates factors that contribute to resilience. Among them, APA lists supportive relationships, making realistic plans and realizing them, a positive view of ourselves and confidence in our strengths, communication, and problem-solving skills as well as managing strong feelings and impulses (more details on the protective and risk factors is described in the following section). Based on these findings, APA suggests ten ways to build resilience. The steps include making connections, avoiding seeing crises as insurmountable problems, and accepting that change is a part of living. Following, moving toward the goals, taking decisive actions, and looking for opportunities for self-discovery. Furthermore, nurturing a positive view of oneself, keeping things in perspective, and maintaining a hopeful outlook. Last but not least, taking care of oneself and taking one's own ways of strengthening one's resilience.

In terms of models and empirical research, there are several concepts proposed. One of them is Kobasa's concept of hardness personality (3C). It assumes the dimensions of control, commitment, and challenge. Hard personality improves health by buffering and moderating stress effects (Soderstrom, Dolbier, Leiferman, Stinhardt, 2000). The next model based on the dimensions proposed by Kobasa is Mental Toughness, proposed by Clough and Strycharczyk (2012). Apart from control, commitment, and challenge, the "4C" concept also assumes confidence (Gerber, Kalak, Clough, Perry, Puhse, Elliot, Holsboer-Trachsler, Brand, 2012) and is often used in the business environment and the coaching process.

The next one, Antonovsky's sense of coherence model, is a construct recognized as part of salutogenesis, and is often compared to mental resilience and falls on the health-illness continuum. It consists of three elements: a sense of comprehensibility (cognitive aspect), a sense of resourcefulness – controllability (cognitive-instrumental aspect, with an emphasis on felt control), and a sense of meaningfulness (emotional-motivational aspect) (Antonovsky, 1995; Ogińska-Bulik, Juczyński, 2008). Review of empirical research presents that high level of coherence is associated with better health (mainly in women), reduced risk of health disorders, low level of physical discomfort, satisfaction with youth, prevents PTSD symptoms, negatively correlates with depression and anxiety and also allows to predict the subjective state of health in the next 4 years of life (Ogińska-Bulik, Juczyński, 2008).

The empowerment model of Zimmermann and Warschausky (1998), was treated as an alternative to mental resilience and as a protective resource of the individual, refers to the

sense of control. Empowerment consists of three strengthening components: intrapersonal, interactive, and behavioral. One of the main elements of the concept in terms of intrapsychic strengthening is a sense of control (Kaczmarek et al., 2011).

As Kent and Davis (2010) argue, the study of adult resilience is a vibrant area of research. They present the general resilient US population after the World Trade Center attack on September 11, 2001, instead of forecasted trauma and depression. Nonetheless, Kent and Davis indicate some therapeutic interventions for adults that build the capacities, and at the same time, refer to the basic resilient concept. Among them are: Life skills training for PTSD related to childhood abuse (Cliotre et al., 2002), Safety skills for PTSD and substance abuse (Najavits, 2002), Behavioural activation (Jacobson et al, 2001), Well-being therapy (Fava, 1999), Mindfulness and change therapies such as Dialectical behavior therapy [DBT] (Linehan, 1989), Mindfulness-based cognitive therapy [MBCT] (Teasdale et al., 2000), and Acceptance and commitment therapy [ACT] (Hayes, 2004).

2.3. The protective factors and the risk factors

Taking into consideration the essential factors contributing to resilience, protective factors seems to play important role. In general, protective factors reduce or neutralize the effects of risk factors. Garmezy (1985) and Masten (2007) distinguish categories of factors, which include individual, family, community, and social features. The individual features include good intellectual functioning, socially and adaptively positive temperament, the ability to establish and maintain positive relationships with peers, effective emotional and behavioral regulatory strategies, positive image own person, positive attitude to life, faith and sense of meaning in life as well as possessing qualities valued by society. The family features include warmth, coherence, harmonious relations between parents, having clearly defined expectations, parents' involvement in the child's affairs, positive relations with siblings, authoritative parental style (high level of warmth, parental structure / monitoring and expectations), supporting relationships with further family members, socioeconomic position of the family, as well as a higher than secondary education of parents.The community features include the adults outside the family, good neighborhood, well-functioning school, employment opportunities for parents and teenagers as well as public health care (Junik, 2014; Wright, Masten, Narayan, 2013). The social features and the features related to culture include the policies protecting children, values, and measures directed at education, prevention, and protection against oppression or political violence as well as low acceptance of physical violence (Borucka, Ostraszewski, 2012; Pat-Horenczyk, 2009).

Additionally, more likely to cope with the traumatic experience and adversity are people who have "an optimistic attitude, self-esteem and efficiency, and a belief that they can shape their lives, are deeply involved in the implementation of [...] tasks and experience changes as exciting challenges, they are able to use support, help others and are altruistic, coping with affect regulation well, they are resourceful, have better cognitive skills and greater intelligence, high self-esteem and internal control location, high temperament, are witty, have a sense of humor, are flexible, empathic and socially sensitive" (Szwajca, 2014).

Risk factors can be recognized as random factors that are not subject to the will of the individual. These can be negative events or life experiences that interfere with the course or development of the individual. Borucka and Ostraszewski (2012) and Borucka (2011) list groups of the risk factors – as the predictors of disorders – family, individual, and environmental factors. Family factors include, e.g., mental disorders of parents (depression,

schizophrenia), living in poverty, parental crime, divorce, hostile family climate, low parental education, lack of parenting skills, and orphanage. Individual factors include, e.g., related to genetic and biological susceptibility: difficult temperament [impulsiveness, frequent negative moods, emotional imbalance] and low level of intelligence, [male gender]. Environmental factors include, e.g., high unemployment, crime, violence at home as well as a low level of education at school (Borucka, Ostraszewski, 2012).

They distinguish three groups of children exposed to risk factors and the corresponding processes and resilience factors. Children experiencing violence (positive adaptation in 6–21% of children) are protected by positive and supportive relationships with foster caregivers, mutual friendship (a source of strengthening self-esteem), and a stronger sense of being accepted and developing social skills. For children raised in homes with alcohol abuse, the protective factors are: having a family of constant rituals, supporting the attitude of a non-drinking parent (good care and safety), psychological distance of the child to family problems, at least one caring and caring adult for the child, support and help from older siblings, as well as lasting and mutual friendship. However, in the group of children who survived the war trauma, the sense of agency, social intelligence, sharing their experiences, thinking about the future, hope for change, faith in God, and morality are protective. What is more, referring to the interaction of risk factors with protective factors, Borucka and Ostraszewski (2012) mention the three overlapping models mentioned above: the risk balancing model, the risk reduction model, and the risk immunization model.To summarize, Zautra, Hall, and Murray (2010) present the following profile to express the risk and resilience factors.

Table 1. Risk and resilience factors

Risk factor index	Resilience resource index
Biological: - Blood pressure: diastolic > 90, systolic > 140 - Cholesterol > 240 mg, resting glucose > 124, body mass index > 25 - Genetic factors associated with anxiety - High C-reactive protein and/or other elevations in inflammatory processes	*Biological*: - Heart rate variability - Regular physical exercise - Genetic factors associated with stress resilience - Immune responsivity and regulation
Individual: - History of mental illness - Depression/helplessness - Traumatic brain injury	*Individual*: - Positive emotional resources - Hope/optimism/agency - High cognitive functioning, learning/memory and executive functioning
Interpersonal/ family: - History of childhood trauma/adult abuse - Chronic social stress	*Interpersonal/ family*: - Secure kith/kin relations - Close social ties
Community / organizational: - Presence of environmental hazards - Violent crime rates - Stressful work environment	*Community / organizational*: - Green space and engaging in the natural environment through community gardening - Volunteerism - Satisfying work life

Source: (Zautra, Hall, Murray [2010]).

2.4. Resilience and early adulthood

Due to many socio-cultural changes and new challenges that adults face daily, the need for early intervention is rising. The meaning of resilience and the interventions enhancing individual inner sources may partially answer the need for prevention. As resilience is a multidimensional term regarding the process, the outcome, or the personal traits, depending on definition, the basic idea is that resilience promote mental health and well-being among the population. What is more, successful coping with daily stresses, and adverse events, even traumatic ones, bring the self-confidence in oneself. This fact results in higher self-esteem and the credit for one's abilities in return. Thus, based on the positive feedback loop, the individual is more prone to cope with adversity in the future. Based on the undeniable impact of people's resilience on their' mental health, several interventions were designed and tested, both in science and in practice.

In the history of resilience research, four main search trends are clearly distinguished. The first one aimed at protective factors, focusing on children with difficult and negative life experiences. The second one aimed at discovering the resilience processes. The third one was testing the resilience in practice. Furthermore, finally, the fourth one was based on the interdisciplinary approach to processes and resilience mechanisms (Borucka, 2011; Sikorska, 2016; Wright, Masten, Narayan, 2013). Alongside the development of knowledge regarding resilience, also a noticeable extension of interest is reported, from the population of children, through adolescents and young adults, and finally to adults. Still most research put the emphasis on the children and on the ones, who are at risk of traumatic life events (Borucka, Ostraszewski, 2012), Therefore further exploration of resilience in those exposed to daily struggles, stressors, and everyday challenges in young adults seems to be important direction for the future.

What is important is to maintain a focus on adulthood while thinking about enhancing resilience. Intervention programs enhancing resilience in children are well-developed and have a broad range of choices (e.g., the Penn Resilience Programme, the Zippy's Friends, the Emotional First Aid Kit, the DECA program, and so forth). On the contrary, there are not many programs dedicated strictly to adults. Most of the interventions that enhance resilience, by the way, come from cognitive-behavioral methods and therapy. Thus, in the light of the need for further research and dedicated evidence-based interventions for adults, along with the benefits coming out of high resilience level, science should continue to follow this way. At the same time, the consciousness of organizations, companies, and global policies should bear the idea of development in individuals' resilience.

3. CONCLUSION

As Wynne, De Broeck, Leka, Houtman and McDavid (2014) argue, "the cost of poor mental health has a major impact on jobs. As part of the work on The European Pact for Health, it was estimated that in terms of performance, the total cost of absence caused by mental illness in 2007 amounted to EUR 136 billion. This amount corresponds to around 624 Euros for employed then a person in the EU. Of this, EUR 99 billion was due to depression and anxiety disorders. The costs of mental illness can be compared with those of cardiovascular disease, which in 2007 amounted to EUR 36 billion. It should be noted that these costs do not apply to medical treatment or care benefits social or other costs incurred by the general public. Many other studies have also found that the cost of poor mental health is very high. For example, in 2002, the European Commission estimated the

costs arising from associated stress with work represent 3-4% of the gross national product, and in Germany, the annual cost associated with disturbances psychological estimates were estimated at 3 billion Euros. [...] Data collected in many states indicate that poor mental health is responsible for an increasing proportion of absence, disability, and time for early retirement" (p. 13).

Recent data (Tracz-Dral, 2019) show that economic and social costs of mental health diseases are serious burden for national health care systems and economic development of many European countries. It is estimated that the global cost of mental health issues is more than 4% of the gross national product, that is around 607 billion Euros. Around 1,3% of GNP (EUR 194 billion) cover direct expenses of health care system, 1,2% of GNP (EUR 170 billion) cover social intervention programs, and 1,6% of GNP (EUR 243 billion) cover indirect costs of labour market.

According to COVID-19 pandemic outcomes, it is estimated that total short-term costs for the young generation mental health issues reaches around EUR 352 billion (Kutwa, 2021).

According to the epidemiology statistics on mental health across the world, especially within depression and anxiety symptoms, more attention needs to be drawn into prevention, prophylaxis, and protective factors. Instead of post-factum actions, such as treatment, rehabilitation, or hospitalization, the great opportunity of supporting the inner sources of resilience seems to rise just in front of our society. Not only for the sake of the public money or the entrepreneurs' money that is invested year by year in citizens and employees that are unable to live a productive life due to the mental illness. But primarily for the quality of each citizen day-to-day life.

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REMOTE WORK IN LOCAL GOVERNMENT UNITS OF THE MAZOWIECKIE VOIVODESHIP: EXPERIENCES FROM THE FIRST WAVE OF THE COVID-19 PANDEMIC

This article describes the results of studies on remote work introduced due to the COVID-19 pandemic in public administration institutions in local government offices. We have synthesized the available literature on remote work, with a focus on identifying factors enabling remote work, and the benefits and risks of implementing such a system. The empirical section diagnoses the transition in public administration to a remote working model and identifies the impediments associated with this process. We have also attempted to formulate specific recommendations to improve the operations of Polish local government offices. Therefore, local authorities can adopt the results of this study to develop operational programs aiming to digitize administrative institutions.

Keywords: remote work, local government, COVID-19, remote employee, digitalization.

1. INTRODUCTION

The COVID-19 global pandemic has changed the way many companies work, especially in technology industry. On Wednesday, March 18th, 2020, Microsoft announced that all employees at its headquarters in Puget Sound, Washington, USA, were expected to work from their homes and not return to the office until further notice (Butler, 2020). A week later, Microsoft employees received the logs as part 'work from home' research. They were asked to report the difficulties they encountered in their work organized on a completely different basis than usual. They were also asked to determine whether they perceived these challenges as insurmountable or rewarding experiences[3]. The global pandemic has become a turning point in thinking about remote work.

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[3] 435 employees kept a log. In the past, this form of research has been used to analyze programmers' working habits and methods of goal setting (Meyer, Murphy, Zimmermann, Fritz, 2019; Czerwinski, Horvitz, Wilhite, 2004; Lazar, Feng, Hochheiser, 2017).

Telework is currently praised as an alternative style of work responds to various social and business constraints of the classical approach. Initially, this solution did not gain the trust of a majority of the companies. However, in the late 1980s and early 1990s, some organizations began to implement this method to plan their knowledge workers' job performance flexibly (KDV Prasada, Rajesh, Vaidyab, Mruthyanjaya Rao Mangipudic, 2020). Telework was also intended to respond to overloaded communication, tiring business trips, maintaining business continuity in the event of outsourcing or offshoring, or the need to reduce office space, i.e., the issues resulting from the reduction of the company's operating costs. In recent years, several factors, such as the growing concern for global warming, the need to reduce greenhouse gas emissions, and the soaring prices of fuel and energy, spoke in favor of implementing remote working. The commute trip reduction resulting from such solutions is also considered responsible development (Greenberg, Nilssen, 2008). Currently, a pandemic outbreak has become a main factor in mobilizing and accelerating the implementation of remote work solutions.

However, in many cases of these early attempts at teleworking, the companies avoided the implementation of formalized programs for a various reason. For some, the main obstacle was the organizational culture; the option of giving up management and control over employees was unacceptable. For others, the idea of introducing new work-related solutions was seen merely as a potential social experiment to win over workers. Most importantly, it was the lack of technologies necessary for efficient work in remote locations – technologies which would enable the creation of viable, collaborative teams.

For a long time, telecommuting has been perceived as something exotic, from the perspective of both work organization and human management. Research is being carried out in many scientific centers to identify fundamental changes in the approach to teleworking and the development of technologies supporting it (Driver, 2017). It is a fact that teleworking is now attracting increasing interest for both large and small businesses. The convergence of several technological, environmental, and economic factors, the growing needs of companies and employees, and the availability of appropriate technologies – all this creates almost ideal conditions for the dynamic development of teleworking. The changes of working environment – together with an evolving social approach to work-life balance – cause a shift in how organizations treat their employees. The rapid changes made during the COVID-19 pandemic prove the existence of such a phenomenon (Arntz, Ben-Yahmend, Berlingieri, 2020).

Remote work offers solutions to many issues affecting large and small businesses. It has gone from the initial phase of the 'new wave,' characterized by vague, minor benefits expressed through statements like 'I work from home, and I can dress comfortably,' and transformed into a better-understood concept with clearly visible personal benefits such as: 'I can do more and save money because I do not have to travel' or 'I can pick up my children from school and make up for that time y working later and connecting with colleagues on another continent.' (Greenberg, Nilssen. 2008). There are only several organizations still questioning the value of remote work. The workspace culture has changed enough to accept that people can responsibly perform the assigned tasks and understand that telework is compatible with the shifting needs of dispersed organizations. Undoubtedly, this is also because the concepts of working from 8 a.m. to 4 p.m. (or from 9 a.m. to 7 p.m.) and being employed by only one company throughout an entire career are getting less popular.

Teleworking is entering a phase and is becoming widespread solution adopted by both large and smaller organizations. This is also possible due to the number of new and

improved technologies, commonly referred to as unified communications (UC) with mobile applications playing the most important role

The purpose of the article is to identify the opportunities and threats resulting from the implementation of remote work as a specific way of organizing work. The empirical research presented in the article made it possible to implement a specific objective, namely – to formulate recommendations for Polish local government offices on how to effectively switch to the remote work mode.

2. DEFINITIONS OF REMOTE WORK

Telework (work performed at home or in a satellite office) is a technology-based mode of operation that can be defined as a method of performing work remotely using information and communication technologies (ICT) in deliver the results (Peters, Ligthart, Bardoel, Poutsma, 2016). It is mainly characterized by:

- the use of various job locations (the central offices, homes, or the third places such as satellite offices),
- taking advantage of all types of ICT employment offered in many different forms including contract and B2B model organization of the working time (i.e., percentage of working time outside the head office).

There are also various forms of remote work: teleworkers, freelancers, mobile workers, independent online service providers, internet entrepreneurs, employees of virtual organizations (Al-Shathry, 2012). Researchers point out that there is no uniform approach to remote work. It is also referred to as teleworking, telecommuting, e-learning, virtual teams, outsourcing or offshoring, virtual communities, virtual connections, and technology-assisted business. A virtual organization has been defined as an environment in which employees are connected electronically but not physically. Terms *virtual* and *virtualized* work differ from each other depending on the number of people involved, the degree of interaction between them, and the degree of the virtuality of the team (Jonsen, Maznevski, Davison, 2012). Attention is paid to the challenges of virtual management and leadership in virtual teams. Some authors discuss the subject of e-Leadership, defined as the process of social impact on virtual teams, and D-Leadership, which refers to the distance between members of distributed teams and the context of human management in which advanced information and communication technologies are mediating. Other frequently mentioned terms include *distributed leadership*, *mobile management*, or *remote management and leadership*. All of them describe the relationships differentially related to the context in which they occur – proximal vs. remote. The terms *leadership* and *management* of virtual teams are used interchangeably (Kelley, Kelloway, 2012).

Remote work can be used by organizations to attract, motivate, and retain highly skilled and valuable employees. Companies can gain an advantage over competitors from the thoughtfully designed HRM strategies, including teleworking practices. Competitive advantage can be gained by proper management of telework. This finding, too, may introduce a new approach to the business management. The long- and short-term advantages and disadvantages of remote work for all the stakeholders' groups (managers, employees, customers, suppliers, society) play an equally important part in strengthening the company's market position (Peters, Van der Lippe, 2007). Advantages include increased work autonomy, time-space flexibility, work motivation, commitment, flow, job satisfaction,

lowered stress level, and intensity of work-life conflict, and the reduction of commuting (Illegems, Verbeke 2004).

It is also important to consider all possible shortcomings associated with this type of work. Occupational and social isolation, possible loss of commitment, longer working hours, stress and burnout, the need for permanent accessibility, and possible lack of work-life balance should all be taken into account when developing management processes. The literature on that subject suggests that the values important for that process do not significantly differ from those essential for managing a traditional organization, such as trust and relationship building, communication and knowledge sharing, decision-making, leadership, and diversity. Furthermore, it is often implied that remote work requires new skills. The workers must identify and then constantly develop and strengthen the types of skills particularly necessary for the assigned job. Those who intend to work remotely must especially focus on deepening their technological knowledge and developing their competencies in the fields of time management, problem-solving, and decision-making (Kerber, Buono, 2004).

The virtual teams constitute a separate but also very important problem. They are defined as geographically and temporally dispersed groups of employees, collaborating primarily through the Internet, i.e., using information and communication technologies (Driver, 2017). These technologies include, among others, text-based communication and audio media. The former rests on emails and using servers, which enable sharing knowledge, updates, and documentation. In turn, audio media include phone calls (enabling to have a quick interaction), meetings, chats (asking simple questions and getting instant answers), video conferencing, social networks and platforms, discussion boards, and virtual walls. Increasingly sophisticated, elaborate, and cost-effective grouping software is being produced, and the virtual world environments are now available to more people than ever before. The COVID-19 pandemic mentioned at the beginning of the article has only accelerated these processes. There are already interesting articles on this subject, which examine the pandemic's effects from many different perspectives (Möhring et al., 2020).

3. OPPORTUNITIES AND RISKS ASSOCIATED WITH REMOTE WORK

Undeniably, remote work begins to play a greater role around the world. Research shows a generally positive attitude towards such a way of performing tasks. However, the affective, cognitive, social, professional, and psychosomatic dimensions of well-being at work are still playing an important role in the functioning of the organizations. The benefits of teleworking can have its impact on the organization, its employees, but also society as a whole. The results of the already conducted studies indicate that we know more about the affective state of remote e-workers and their social and professional life than about their cognitive functioning and psychosomatic well-being. The sense of social and professional isolation and perceived risks associated with the chances of getting a promotion while working remotely are the negative effects of teleworking frequently pointed out by researchers (Greenberg, Nilssen, 2008). Some researchers believe that remote work is associated with the feeling of uncertainty and specific sensitivity. Paradoxically, the weakening of mechanisms of direct control over the tasks in teleworking can cause a lack of trust towards virtual employees (Bailey, Kurland, 2002). To prevent this, it is important to undertake special efforts aimed at maintaining the teleworkers' relationship with the employer and social connections between the employees themselves. Inscribing such

activities into the organizational culture determines the level of activity and satisfaction in a workplace and helps establish clear boundaries between one's working time at home and private time (Greenberg, Nilssen, 2008).

Access to teleworking can increase employees' motivation and engagement, since – in some organizations – it is associated with status and prestige. In many cases, only the best-educated, the most qualified employees and managers have the right to telework. Remote work requires self-regulation skills and proactive professional behavior and can particularly motivate development-oriented workers. Teleworking can lead to greater learning opportunities and give an impulse to search for novelties. As the autonomy of work increases, one can also choose from a wider range of methods and better control the pace of the task's execution (Peters, Poutsma, Van der Heijden, Bakker, De Bruijn, 2014).

e-Employees have considerable freedom to set their schedule, the pace of work, and working methods compared to traditional ones, but that is not all. They also have greater autonomy, especially in terms of choosing their goals and coworkers. Those factors can have a positive impact on reducing the level of professional stress, which can positively influence organizations and employees. The development of information and communication technologies helps decrease the level of inconvenience resulting from separation, isolation, the feeling of disintegration, etc. (Kurland, Cooper, 2002; Beham, Drobnič, Präg, Baierl, Eckner, 2019).

Researchers also stress that the differences between the remote work performed individually and in virtual teams should not be forgotten. Remote work is an organizational phenomenon. Still, in empirical analyses, much more attention is paid to personal issues related to teleworkers. There is a danger of people being selected by the organizations to work remotely, independently, or in virtual teams, which may lead to the exclusion or marginalization of some employees. Often, the choice is made ad hoc, only for current needs, and organizations do not create long-term strategies focusing on the improvement of competencies and development of skills necessary to complete the tasks assigned to virtual teams.

Most researchers believe that virtual collaboration is beneficial to organizations and their employees. It provides managers and teams with access to the knowledge and talents in the organization and gives them flexibility which is necessary for all kinds of conceptual or creative work (Kelley, Kelloway, 2012). It is easier to use local expertise needed to quickly respond to the needs of customers in local markets. Teleworking also makes it possible to easily organize the work of people from different locations so that the company seemed to be closer to the customers and suppliers (naturally, provided that the organization uses effective communication and information techniques). A significant benefit of this form of working is the use of cultural diversity, especially in the fields in which innovation and creativity are valued (Gibson et. al., 2014). Economic and environmental benefits (costs reduction in travel and real estate, sustainability), which have been highlighted since the 'dawn' of remote work, are now becoming increasingly important, and are prioritized in some organizations.

Virtual collaboration can bring long-term benefits in the form of improved human capital indicators (such as increased employee efficiency and productivity or team member satisfaction). It can result in more effective recruitment, improved attractiveness of the company as an employer, and, in the long run, gaining a competitive advantage in the market. Virtual work can help retain valuable professionals in the organization when their personal matters force them to change their place of residence. The needs of young workers,

especially the Gen Y'ers and the Millennials, who are known for their ambition to maintain work-life balance, cannot be underestimated. After all, virtual work gives them flexibility and independence (Al-Ani, Horspool, Bligh, 2011; Jonsen, Maznevski, Davison, 2012).

There are more advantages of working in virtual teams pointed out by researchers. Electronic communication provides time to process, assimilate, or even better understand information. Visual anonymity can be also considered an advantage for some team members. For those who are shy and have difficulty expressing their opinions in face-to-face contact, this form of communication may be even beneficial because it makes it easier for them to find the courage to express their own opinion (Nurmi, 2011).

Despite the many opportunities and benefits mentioned, virtual work creates new challenges for teams and the people who manage them. The marginalization of nonverbal communication in this form of collaboration is a serious problem. The inability to observe the behavior of other team members, even if they are, for example, video conferencing, can lead to misunderstandings and misinterpretations, especially when multicultural teams working together. Virtual teams might also face obstacles to achieve high results, which can be precisely a consequence of the difficulties in coordinating their work. Leadership imperfections cannot be underestimated. The competencies necessary to work with virtual teams are much different from those considered to be 'classic' (Klitmøller, Lauring, 2013; Kirkman, Rosen, Gibson, Tesluk, McPherson, 2019).

Employees working in virtual teams may have difficulty interpreting written and verbal messages. Silence, for instance, does not necessarily mean a lack of concentration – it may be the result of an intense effort put into the process of listening and thinking. Virtual work causes a physical distance and results in a lack of connection between team members, and managers are getting to know their subordinates, their needs, and expectations more slowly than in traditional conditions. Informal communication, which plays an important role in building the organizational climate, is significantly reduced. Building a sense of belonging to the team when working remotely can be more difficult when team members rarely meet. Isolation and loneliness were also identified as common disadvantages of this type of work (Maznevski, Chudoba, 2000; Avolio, Sosik, Kahai, Baker, 2014).

In reality, it is not rare that organizations and their managers are reluctant to introduce remote working: they believe that the company does not benefit from such a solution as greatly as the employees. Managers find it more difficult to influence team members, which leads to a decreased level of motivation, declines in performance, or lower productivity. All those factors may have a negative impact on employee engagement. There may also be difficulties with building trust and relationships between team members or in terms of conflict resolution.

The remote work era marks a general redesign of corporate thinking (the used phrase has a symbolic meaning and can refer both to a large, global organization and a small, local one). In the traditional sense of work, people should always be in the office, monitored, on view, at hand, always at their boss' disposal, which has no place in the new, virtual, organizational reality (Pinjani, Palvia, 2013; Zander, Mockaitis, Butler, 2012; Wildman, Griffith, 2015). This change in mentality can only take place if we show evidence, such as a 2018 study conducted by Bocconi University at the Carlo Donden Research Centre (Agostini, 2020). In this study, two groups of 150 employees were compared. The first group worked traditionally, commuting to the company at set times. People in the other group freely decided where to perform their duties only one day a week. The result after nine months of the experiment was that employees who had the right to flexibility in the

way of performing the assigned tasks achieved 3–4% higher productivity than the other group. They were more satisfied and had a lower absence rate than their colleagues. This means that well-organized remote work can increase productivity and work-life balance. However, poor management in that field can contribute to inefficiency and reduce employee motivation.

An analysis of 4,641 logs written by Microsoft developers (mentioned at the beginning of the article) (Butler, 2020) provided similar arguments. The participants of this study found that these logs helped them achieve work-life balance and gave them the feeling that the company cared about them during this difficult time of the pandemic. The author points to a broader perspective: challenges faced by engineers in large technology companies, who radically changed their work mode to the remote one; individual strategies for dealing with these challenges; conclusions for the future that can be formulated to increase the satisfaction; and the well-being of teleworkers.

Thanks to the new opportunities offered by digitalization, remote e-work is becoming an increasingly popular way of working in many developed countries, enabling people to choose where, when, and how they will perform their daily work duties (Charalampous, Grant, Tramontano, Michailidis, 2018). Research suggests that this may have paradoxical consequences for individual well-being: the greater the professional autonomy of remote e-workers, the greater the effort they put into their work. This dependency can influence the well-being of an individual in a negative way (State of Remote work 2018; Mazmanian, Orlikowski, Yates, 2013). One possible explanation for this contradiction is that groups and different types of remote e-workers are not distinguished yet, and the working conditions and consequences of remote work for individual well-being may vary depending on the kind of remote location. Another possible explanation is that existing research is based on an ambiguous definition of the employee or virtual team autonomy.

The implementation of telework requires using a set of key technologies, which can pose a major challenge to many organizations due to costs, skills, and competencies. It is a priority to secure broadband Internet access, which supports emails, team workspaces, instant messaging (IM), and VoIP or business phone lines (especially ones integrated with the organization's PBX), but also to give access to web conferencing and enhanced media tools like video conferencing. A properly implemented teleworking system can be incorporated into the structure of the organization (or, as the experts say, modify the organizational DNA) and positively change it, leading to operational improvements, increased productivity, better work-life balance, and stability in employment (Greenberg, Nilssen, 2008).

How can technology be used to support remote work in today's world? Several solutions proposed by tech companies, which are currently used in remote operations are platforms, such as Zoom, Teams, Skype, Google Hangout, GoToMeeting, and CiscoWebexP, offering a variety of services, from HD video and audio calls to real-time subtitle recording, intelligent messaging, screen sharing, private conversations, and more. Depending on the version that is being used (free or paid), the number of participants in the online meeting and the presence of additional features may vary (Greenberg, Nilssen, 2008).

Researchers indicate the aforementioned secure, broadband Internet access to the information and the organization's key applications as the most basic technology useful in remote working mode. There are three issues linked to this requirement:
- Business telephone line – preferably with a logical connection to the organization's PBX;

- Access to web conferences, enabling participation in meetings and cooperation on documents, presentations, and other audiovisual projects with colleagues and people from the outside;
- The ability to use instant messaging (IM) to keep employees in close contact with their colleagues and teams. The IM technology quickly gained recognition in the world of customers and was adopted by participants of different business processes, who create teams independent of geographic location.

Other technologies include access to the document repositories (such as Microsoft SharePoint server) and audio and videoconferencing services. Among useful technologies identified in the Harris Interactive Omnibus research, one can mention document repositories, instant messaging, and audio, video, and web conferencing services (Greenberg, Nilssen, 2008).

The key to harnessing these technologies and making them available to teleworkers, mobile workers, and members of distributed teams is cybersecurity, which can be relatively easily monitored when work is done in an office – a physically identifiable facility. But is this really so? The researchers suggest that we are dealing with a certain paradox. As we entered the Internet age, the security of physical objects was threatened by unauthorized attempts to access email, phone calls, and data stored on servers. The truth is that the security is only good to the extent that authentication systems, firewalls, and voice/data encryption are effective throughout the whole information path. If these systems are used at the level of server – as they should be – then remote work does not significantly increase the risk (https://harris-interactive.co.uk/solutions/harris-24).

The above theoretical discussion can be summarized in the form of a graph (see Figure 1). The factors influencing the effective transition to remote work mode are shown together with the opportunities that arise as a result of the implementation of the remote work model in the organization and the threats that this mode of operation entails.
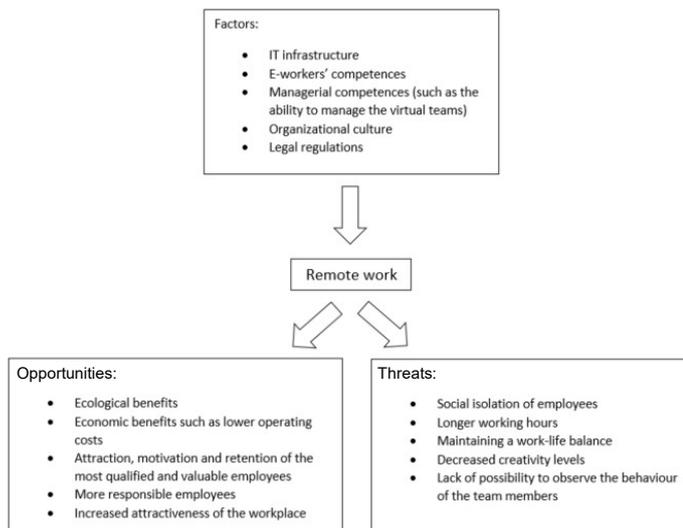

Figure 1. Model of transition to remote work mode

Source: Own elaboration.

4. RESEARCH METHODOLOGY

The rapid spread of the coronavirus throughout the world and the sudden increase in the number of cases of the COVID-19 disease caused by the virus forced the Polish government to react. On March 12th, 2020, a state of epidemic threat[4] was introduced, and an epidemic state was introduced just three weeks later, on March 23rd. To minimize the risk and the number of infections, the government introduced a number of restrictions, such as closing schools, introducing remote learning, restriction of movement, ban on gatherings, sports, and cultural events. At the same time, a recommendation for the organizations was issued to transition to the remote work mode, if it was possible. The administration bodies also faced the challenge of reorganizing their work. Hence, the research problem concerned the identification of barriers and the needs of municipal and city offices with poviat rights in the perspective of employees switching to remote work. The aim of the research was to explore the issue of remote work in government offices (as organizations considered to be slower to adapt to changes) and provide a diagnosis, which would help pave the way for the future development in the field of digitization in those institutions.

In May and June 2020, an internet survey[5] was conducted with the authorities of local government units (LGUs) at the commune level from the Mazowieckie Voivodeship, as part of the project 'Sustainable development of the Mazowieckie Voivodeship in the new system of NUTS2 and NUTS3 units. Metropolitan, regional, and sub-regional level'[6]. The questionnaire was sent to all 314 commune offices of the Mazowieckie Voivodeship[7]. The final number of completed questionnaires was 136 (return rate: 43%). The surveyed local government units were divided into the following categories:

- Statistical regions according to the NUTS classification: the NUTS 2 region 'Warsaw capital' and the NUTS 2 region 'Mazowiecki regional'[8].
- Type of commune: municipal commune and city with poviat rights, urban-rural commune, and rural commune.

The division is separate and exhaustive. Each research unit can be assigned only to one class of a given category. Statistical inference was performed using non-parametric tests due to the, at most, ordinal level of measurement of variables and their qualitative nature.

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[4] Pursuant to Art. 2 sec. 22) and 23) of the Act of December 5, 2008, on preventing and combating infections and infectious diseases among people, the state of epidemic threat is a legal situation introduced in a given area in relation to the risk of an epidemic in order to take preventive measures specified in the Act, while epidemic state means the legal situation introduced in a given area in connection with an epidemic in order to undertake the anti-epidemic and preventive measures specified in the Act to minimize the effects of the epidemic.

[5] The survey consisted of 24 questions. The LIME Survey software was used to carry out the study.

[6] The project is implemented by the Marshal's Office of the Mazowieckie Voivodeship in Warsaw, Warsaw School of Economics and Warsaw University of Technology as a part of the strategic program of scientific research and development 'GOSPOSTRATEG – social and economic development of Poland in globalizing markets.' It was financed by the National Center for Research and Development.

[7] During the studies, an email reminder was sent twice with a request to complete the questionnaire and a telephone contact was made once regarding the same matter.

[8] For more on the division of the Mazowieckie Voivodeship into the statistical units, see Statistics Poland / Regional Statistics / Classification of Territorial Units / Classification of Territorial Units for Statistics (NUTS) / The history of the NUTS classification/ NUTS 2016 revision [access: 24.11.2020].

The relationships between variables were tested with the chi2 test of independence. U Mann-Whitney tests were performed to investigate the relationships between two independent groups, and the differences between more than two independent groups were investigated using the Kruskal-Wallis one-way analysis of variance (multiple pairwise comparisons) with the Bonferroni correction. The significance level adopted for each test was 0.05.

5. THE RESEARCH RESULTS

The results of the survey show that, in 44% of the surveyed local government units, at least half of the employees could perform their work remotely. A statistically significant difference occurs between the responses of the representatives of local government units from the area of NUTS 2 region 'Warsaw capital' and NUTS 2 region 'Mazowiecki regional.' More often (57%), the possibility of remote work was declared by the representatives of local government units from the NUTS 2 area 'Warsaw capital.' Such a possibility was indicated by 40% of local government units from the NUTS 2 region 'Mazowiecki regional.' The type of commune did not differentiate the answers in a statistically significant way.
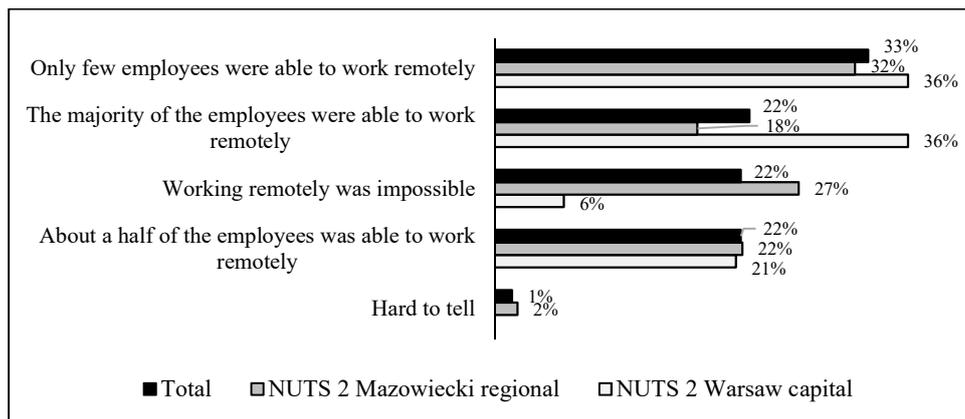
Chart 1. Possibility of remote work

Source: Own analysis based on the survey conducted in the project 'Sustainable development of the Mazowieckie Voivodeship in the new system of NUTS2 and NUTS3 units. Metropolitan, regional and subregional level' GOSPOSTRATEG. Question: Which of the following statements most closely describes the situation in your unit following the declaration of the COVID-19 outbreak? (n = 134).

The necessity to be physically present in the workplace was identified as the biggest barrier for remote work of the officials. The next obstacle (indicated almost half as often) was the lack of hardware and appropriate software enabling remote work. At the same time, the lack of software was mentioned less frequently by the representatives of local government units from the NUTS 2 area 'Warsaw capital.' Nearly 1/3 of the respondents indicated that the insufficient number of e-services provided by their organization is the impediment to changing a work mode. The lack of documents regulating remote work and

the lack of experience in that form of work were also mentioned. The lack of documents was indicated more often by respondents from the area of NUTS 2 'Mazowiecki regional.'
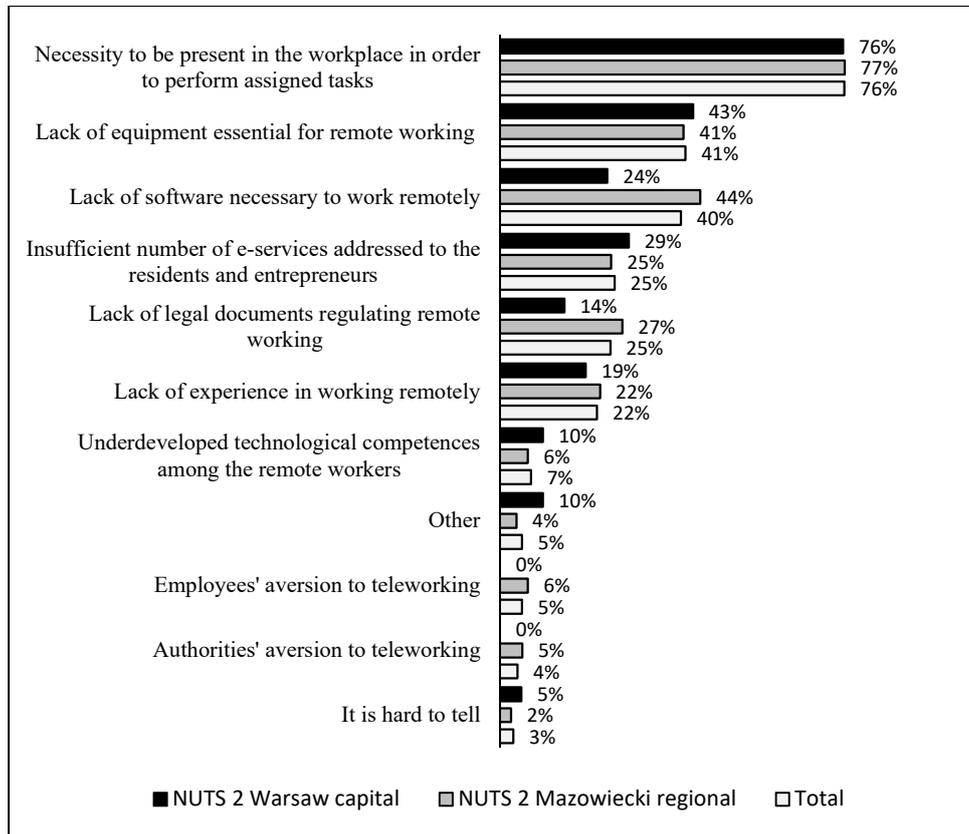
Chart 2. Limitations of remote work

Source: Own analysis based on the survey conducted in the project 'Sustainable development of the Mazowieckie Voivodeship in the new system of NUTS2 and NUTS3 units. Metropolitan, regional and sub-regional level' GOSPOSTRATEG. Question: Which of the following statements most accurately describes the situation in your unit following the declaration of the COVID-19 outbreak? (n = 106). A multiple choice question.

The respondents also referred to the effectiveness of remote work. In most of studied cases (61%), it was assessed at a level similar to that of stationary work. For 1/4 of the respondents, it was at a lower level. Only 4% of respondents indicated the increased effectiveness.

The respondents were also asked to identify the actions which would facilitate the introduction of remote work in their units. Unsurprisingly, the purchase of software enabling remote working was the most frequently selected answer. Next, the necessity of further digitization of the office and increasing the availability of offered e-services was indicated. About 1/3 of respondents believe that employee training is also necessary, both

in the organization of remote work and the use of software enabling the workers to perform the assigned tasks.
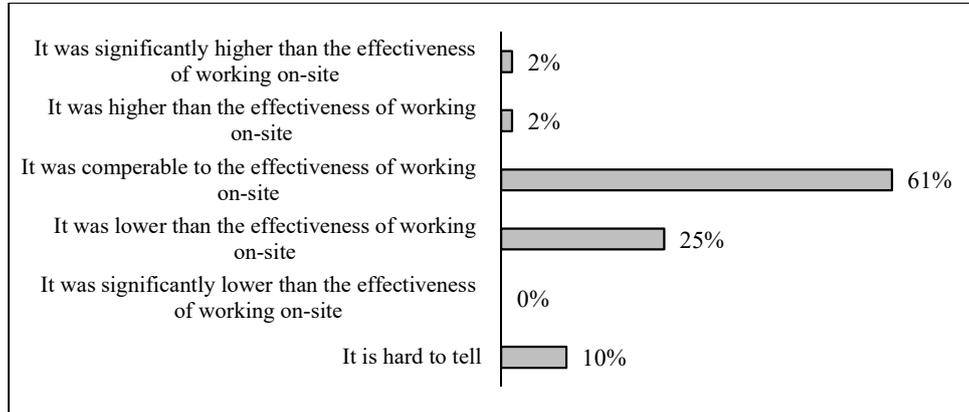

Chart 3. Evaluation of the effectiveness of remote working

Source: Own analysis based on the survey conducted in the project 'Sustainable development of the Mazowieckie Voivodeship in the new system of NUTS2 and NUTS3 units. Metropolitan, regional and sub-regional level' GOSPOSTRATEG. Question: How do you assess the efficiency of work in your unit in the case of so-called remote work? (n = 59).
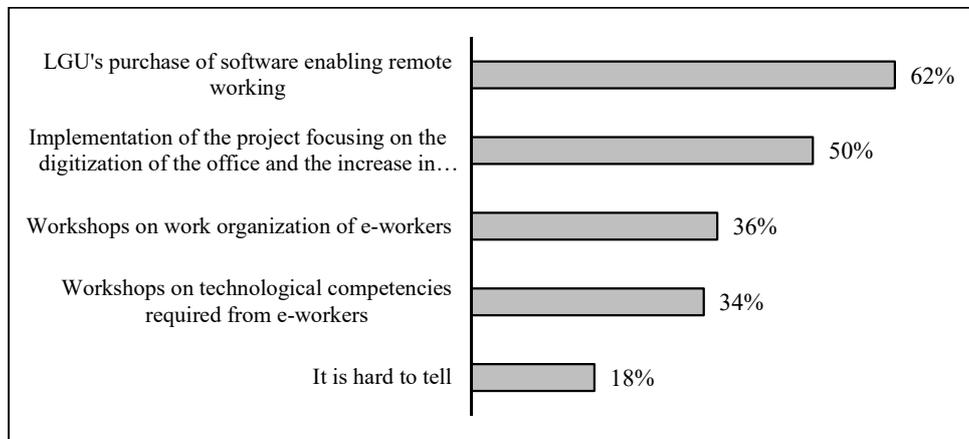
Chart 4. Needs of local government units in the implementation of remote work

Source: Own analysis based on the survey conducted in the project 'Sustainable development of the Mazowieckie Voivodeship in the new system of NUTS2 and NUTS3 units. Metropolitan, regional and sub-regional level' GOSPOSTRATEG. Question: What actions would increase the effectiveness of the so-called remote work in your office? Please select all that match (n = 50).

6. DISCUSSION

The formulation of conclusions and recommendations for the Polish local government offices resulting from the discussed study requires presenting the issue in a much wider context.

The e-Government benchmark 2018 report prepared for the European Commission showed the possible ways of improving public services in Europe and identified the frontrunners in the field of the digitization of public administration. Among the leaders, there are 9 EU countries (Malta, Austria, Sweden, Finland, the Netherlands, Estonia, Lithuania, Latvia, Portugal, Denmark) and Norway. The quality of public e-services in these countries is already at a very high level and is continuously improving. The transparency and scope of activities undertaken by their governmental bodies are systematically expanding. The best effects in terms of digitization of public administration and the use of public Internet services are achieved by Estonia, Latvia, and Lithuania (Koch, 2018).

For many years, Estonia has set an excellent example in this field, as it has successfully created an almost entirely digital society over a period of 20 years. The digitization processes were carried out in parallel: the country not only created appropriate systems and a central state server (x-Road) but also gave Internet access the status of a constitutional guarantee. In 2007, the citizens received electronic ID cards. It was a breakthrough event in terms of the possibility of using a wide package of e-services not only for official matters but also for giving electronic signatures or getting e-prescriptions. ID-kaart supports over 4 thousand services and makes it possible to hold local and parliamentary elections. Since 2014, ID cards are also offered to foreigners (which is not the same as granting citizenship but means the possibility of using e-services) (Małek, Kudaj, 2017).

7. CONCLUSIONS

7.1. Research results

Based on the analysis of the survey results, it can be concluded that remote work is a new challenge for Polish local government offices. Despite the worldwide trend of the progressive development of remote work culture, Polish local government institutions are at the initial stage of implementing solutions and organizing remote work. The necessity to be present in the workplace to perform assigned tasks is identified among the greatest obstacles to introducing that change. On the one hand, the importance of this problem might be a result of a belief – and custom – according to which work can be performed only in a designated place. On the other hand, however, it may result from the visible lack of hardware and software enabling remote work. Insufficient systemic solutions (among others, the lack of clear legal regulations allowing the transition to remote work) are pointed out as another barrier for further development in that field.

The survey shows that – despite numerous investments in recent years (including ones from the European Structural Funds) – the level of digitization of Polish public administration entities is insufficient to ensure undisturbed circulation of electronic documents or satisfactory remote service to the applicants, both of which are crucial for maintaining job performance in the remote mode of work. Another challenge is the need to improve digital competencies among employees and management. Technological and time management competencies as well as competencies in solving problems and making decisions are especially important. In the case of management, training in the organization of remote work, e.g., in the context of control and autonomy of an e-employee, and the

acquisition of virtual team management competencies, are also of key importance. The last of the discussed issues concerns cybersecurity. When transferring the public administration entities to the remote work mode, one cannot forget about new threats that did not take place in the case of stationary work, such as possible leaks of confidential data.

Thanks to the use of information and communication technologies by central and local government institutions, e-government is to transform relations with various entities, primarily citizens and enterprises. The goals of this transformation range from increasing the quality of public services, through more effective policy coordination and more efficient use of resources, to supporting the transparency of the government's actions. In Poland, large funds were allocated for these purposes, but there was no coherent structure, determination in implementation, and most projects connected with this subject were not completed. The sins of the Polish 'e-administration' are primarily the mentality of officials, their attachment to a stamp and paper, lack of coherence and coordination in implementing changes, and inability to promote the attractiveness of e-services. Naturally, one cannot fail to mention the digital exclusion of many citizens in this context (*Grzechy e-administracji*, 2016).

7.2. Recommendations

Based on the model of implementing remote work presented in the theoretical part of the article, and translating it into the practice of management, the following factors enabling the transition to the remote work mode were indicated: IT infrastructure (e.g., hardware, software, e-services, etc.), employee competencies, managerial competencies, organizational culture, and legal regulations. The conducted research shows strong deficiencies in all these areas, which results in the limited possibilities of implementing remote working. For a change to be made, action needs to be taken in all indicated areas. This leads to the conclusion that the national digitization policy must take into consideration not only the implementation of e-services but also the entire component of additional activities, including training of employees and management staff and the provision of equipment required for remote work.

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PARTICIPATORY BUDGETING AS A FORM OF RESIDENTS' CO-DECISION ON THE ALLOCATION OF LOCAL FUNDS: A CASE STUDY OF THE CITY OF PRZEMYŚL

Participatory budgeting, also called civic budgeting, is a major instrument to facilitate engagement in local government affairs and foster social awareness among residents. It consists in involving residents in the allocation of a pool of public funds made available by local authorities. The purpose of this article is to assess the implementation of participatory budgeting in the city of Przemyśl, Podkarpackie Province, between 2013 and 2022. The assessment methods are desk research based on publicly available data, and interviews with city hall staff. The study confirms that the implementation of participatory budgeting made it possible to achieve the overarching goal of the project, which was to increase engagement by encouraging citizens to participate in public life and co-decide on the allocation of public funds.

Keywords: participatory budgeting, local government, local funds, citizen engagement, city of Przemyśl.

1. INTRODUCTION

In recent years, there has been a constant concern at European level about having a greater citizens' participation in democratic exercises in different forms and about finding structured dialog formulas between authorities and the civil society (Boc, 2019).

Social participation, interpreted as the way in which residents interact with their local authorities, constitutes the foundation of social involvement in territorial government activities (Chambers, 2003). It is currently the object of major interest and a great deal of controversy due to hopes expressed by citizens regarding their ability to influence the reality

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around them. The active involvement of citizens may at times be an important guarantee of effective and rational cooperation between the government administration and local communities. Combined with well-developed public institutions, it produces desirable results (Goldfrank, 2007; Hong, 2015).

Increased resident engagement is certainly beneficial to local democracy, and participatory budgeting is an instrument which facilitates this growth. Participatory budgeting is currently the topic of various discussions. At the same time, however, few to no papers exist detailing how it is implemented in Poland.

The purpose of this article is to assess the implementation of participatory budgeting in the city of Przemyśl, Podkarpackie Voivodeship between 2013 and 2022. To achieve this goal, the answers to the following major questions had to be determined:

- how many projects were submitted, and how many were approved as part of every edition of participatory budgeting?
- were the approved projects 'soft' or 'hard'?
- what did the approved projects focus on?
- what was the distribution of the votes?
- how much funding was planned to be allocated, and how much was actually utilised as part of every edition of participatory budgeting?
- what was the contribution of the participatory budget to the city's total expenses in the analysed period?
- how much funding per resident of Przemyśl was actually utilised as part of every edition of participatory budgeting?

The assessment method used was desk research utilising publicly available data acquired directly from the Przemyśl City Hall and its website. For the purpose of obtaining more information, interviews were conducted with City Hall employees responsible for collecting and processing participatory budgeting data. This approach rendered it possible to assess the development of participatory budgeting in Przemyśl in the aforementioned period.

2. LITERATURE REVIEW

Social participation can be generally defined as the participation of citizens in managing the affairs of their community (Hausner, 1999). On the other hand, from the perspective of the pursuit of administrative policies by public bodies, it involves residents participating in the accomplishment of public projects and various decision-making processes (Głąbicka and Świtala, 2016; Legutko-Kobus, 2018).

First and foremost, social participation facilitates the building of a partner-like relationship between local authorities and the citizenry, who participate in local decision-making processes. Its wide-ranging implementation in local government practice fosters the development of what is referred to as civic municipalities (Pol. *gminy obywatelskie*), whose residents are agents, not objects, as far as public policy is concerned (Ostałkiewicz, 2015).

Social participation can assume a variety of forms reflecting various degrees of resident engagement in the decision-making process, ranging from minor to high social engagement (Grzebyk, Pierścieniak, 2021).

Among the most popular models of social participation, one which illustrates the varying degree of citizen involvement in public life, is the ladder of participation, which is a three-tier model (Alexiu et al., 2011; Paul, 1987). The lowest rung of the ladder is

informing, which is the lowest level of participation, and the highest level is co-deciding, which involves the greatest degree of resident participation.

The ladder model has not only rendered participation identifiable, but also measurable. It serves as the base for identifying various instruments aimed at encouraging citizens to become active and engaged (Grzebyk, Pierścieniak, Pytko, 2019).

One such instrument used for the purposes of co-decision-making is participatory budgeting.

This is also referred to in Poland as civic budgeting[4], as it enables citizens to engage in public discussions on the allocation of a portion of local funds to various initiatives and projects submitted by the local community (Musiał-Malago, 2022).

Civic budgeting is a method of involving residents in the allocation of a pool of public funds which has been made available for this purpose by local authorities.

The decision-making procedure involved in participatory budgeting should be adapted to the local context. However, no agreed-upon solutions or templates have been developed in Poland. Some local governments place no restrictions on the creativity of submissions in their participatory budgeting rules. In such cases, residents can submit ideas pertaining to all areas which are within the purview of the municipality. Some local governments do make use of restrictions, prohibiting the submission of 'soft' projects. This means that their participatory budget funds can only be spent on infrastructural projects. Certain local governments decided that their participatory budgeting programmes should encompass their entire municipalities. This group involves local governments whose budgeting programme encompasses a territory divided into auxiliary territorial units, such as districts or neighbourhoods (in cities). The most numerous group of local governments is the one in which the residents can submit ideas pertaining to the entire city and their immediate surroundings. At the same time, the majority of local governments makes use of such conditions as restrictions on age residence registration, legal capacity and place of residence. The procedures used to assess and select projects also vary (Bigoszewski, 2017).

Participatory budgeting offers great benefits to municipalities, thus serving a number of fundamentally important functions, including (Gajewski, 2018):

    a) shaping function, from the perspective of which participatory budgeting is viewed as a decision-making process – residents shape a portion of the budgetary expenses of their local government,

    b) participatory function, which offers interested residents an opportunity to become involved in the decision-making process and indirectly participate in management in accordance with local rules,

    c) information function, rendering a municipality's financial policy more transparent to residents,

    d) educational function, as residents are taught to make conscious decisions and take responsibility for public property.

In Poland, participatory budgets are financed from the budget of the municipality in question. Participatory budgeting was made mandatory in county-level cities in 2019 as part of the Act on municipal governments (Journal of Laws 1990 no. 16 item 95). Polish law places no upper financial limit on such projects, but the minimal amount must not be lower than 0.5% of the municipality's total expenditures as submitted in the municipality's last

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[4] In this article, the terms participatory budgeting and civic budgeting are used interchangeably. In many municipalities, including the city of Przemyśl, civic budgeting is used more frequently.

budget statement. (Act of 8 March 1990 on municipal governments, Art. 5). As part of participatory budgeting, residents participate in a direct annual vote on how to allocate a portion of their municipality's budgetary expenses. The initiatives selected as a result are then incorporated into the municipality's budget resolution. When working on the budget resolution, the municipality may not remove or introduce material changes to any project selected by way of participatory budgeting. Participatory budgeting entrusts the residents of a city with the right to decide on the allocation of a portion of the municipal budget on projects which they consider to be of major importance (Musiał-Malago, 2022).

Participatory budgeting reflects the latest trends in public administration, most importantly public governance, as its mechanisms facilitate the effective and rational allocation of public funds thanks to public oversight of the way these funds are utilised, as well as the related public responsibility of local government leaders (Górka, 2017).

3. RESEARCH METHOD

Przemyśl is a county-level city situated on the River San in Podparkackie Province in south-eastern Poland. Before 1998, Przemyśl was the capital city of Przemyskie Province. According to Statistics Poland, as of 31 December 2021, Przemyśl had 57,568 residents.

Participatory budgeting was originally introduced in Przemyśl in 2013. Due to the fact that no country-wide model of exists for implementing participatory budgeting in cities, the process of its introduction was adapted to the needs of the residents.

The project submission and voting stages in the assessed period were preceded by information and promotional campaigns. The most frequently used channels and tools of public communication were posters, fliers, brochures, advertisements on buses, on-line and social media advertisements (advertising spots), press advertisements, text messages encouraging residents to vote, as well as Q&A meetings on participatory budgeting attended by the City Council, Housing Development Management members and interested residents. These meetings were usually hosted in the City Hall or the administration buildings of individual housing developments.

The interview conducted with City Hall staff indicates that the officials are aware of the importance of informing the residents, as it has a tremendous impact on the difficulty of democratic dialogue and political discourse. They also emphasise that participatory budgeting has been highly beneficial to the City Hall and the city itself. The most salient result was an improvement of the image of the local public administration. Residents place more trust in the City Hall employees and are more understanding, in addition to a consistent increase in community awareness.

The process of implementing every edition of participatory budgeting is defined in the relevant orders of the Mayor of Przemyśl and resolutions of the Przemyśl City Council. Information regarding every edition of participatory budgeting is published on the city's website (www.przemysl.pl) in the CIVIC BUDGET tab, on Facebook via the profile 'Przemyski Serwis Informacyjny', as well as in local press outlets.

During the first few editions of the civic budget (1st through 3rd), projects could be submitted by those residents of the city who were eligible to vote on the day of submission, meaning those above the age of 18. In later editions (4th through 6th), projects could only be submitted by Development Managements, with 7th edition constituting a return to resident submissions. In addition, from 2020, those interested in submitting a project were required to gain the support of a sufficient number of residents (30 residents supporting their project). Table 1 and figure 1 list the number of submissions which were voted on and the number

of submissions approved for implementation as part of the Przemyśl civic budgeting programme.

Table 1. Number of projects submitted, voted on and selected for implementation as part of the Przemyśl civic budgeting programme

Years	Projects submitted total	The number of submissions projects which were voted	Projects approved for implementation	Projects approved but not implemented
2013	47	18	4	0
2014	30	20	6	0
2015	33	19	5	0
2016	27	27	27	0
2017	29	28	27	0
2018	35	34	32	0
2019	58	50	37	0
2020	105	75	37	4
2021	85	60	32	0
2022	73	58	41	0

Source: own study based on: www.przemysl.pl; https://bip.przemysl.pl/55177/budzet-obywatelski.html; https://przemysl.naszemiasto.pl/
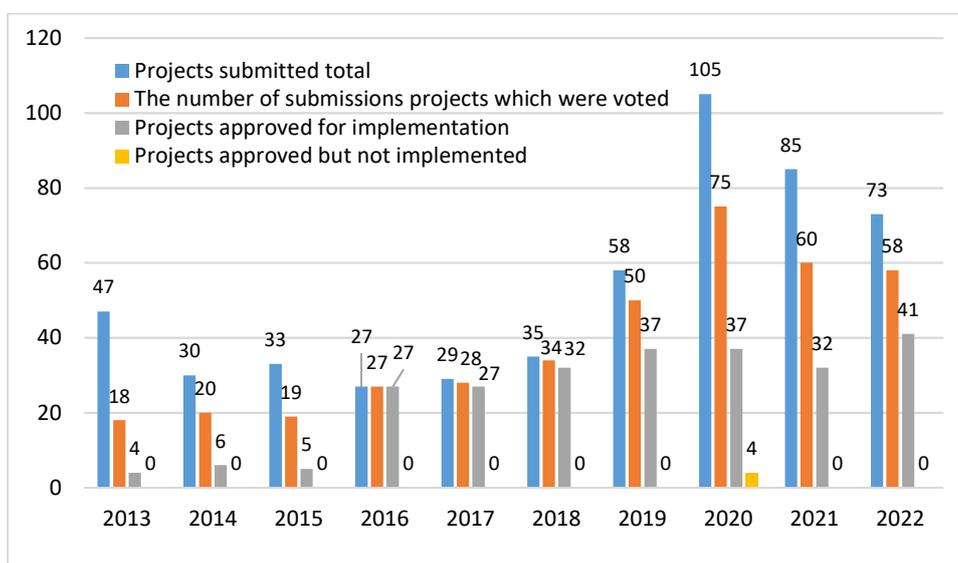

Fig. 1. Projects submitted as part of the Przemyśl civic budgeting programme between 2013 and 2022

Source: own study based on: www.przemysl.pl; https://bip.przemysl.pl/55177/budzet-obywatelski.html; https://przemysl.naszemiasto.pl/

The number of projects submitted to the Przemyśl City Hall between 2013 and 2022 varied. The most projects (105) were submitted in 2020, while the fewest (27) were submitted in 2016. Despite the high number of submissions, only a portion was approved for being voted on. A verification committee was appointed to reject projects on formal and content grounds, due to their technical unfeasibility or because they were submitted after the deadline. The number of projects accepted for implementation differed between the editions, and was contingent on the amount of funding allocated to the individual projects. The COVID-19 pandemic had little impact on the projects submitted as part of the Przemyśl civic budgeting programme. The year 2020 was the sole exception to this, with four projects classified as belonging to the 3rd category ('soft' projects) being postponed until a later date.

The article contains a categorisation of all projects approved for implementation in every edition of the civic budgeting programme. In the case of the first three editions, the funds were not classified according to the type of project or area. After calculating and summarising the estimated costs, the projects with the most resident support were approved for implementation. In later edition, namely 4th, 5th and 6th, projects could only be submitted by Neighbourhood Managements. The funds were divided in accordance with the number of residents in each neighbourhood, although 6th edition was different in that the rules for the 2019 edition of the Przemyśl civic budgeting programme stated that 10% of the amount allocated to a given neighbourhood could be spent on social, cultural, educational or sports-related projects (known as soft projects).

From 2019, civic budgeting projects could be submitted as part of one of three categories:

1) 1st category – urban infrastructure construction and modernisation. These were projects which satisfied the needs of residents regardless of their place of residence due to their nature and impact.
2) 2nd category – housing development infrastructure construction and modernisation.
3) 3rd category – social, cultural, educational and sports-related projects.

Table 2 contains a distribution by category of the projects approved for implementation.

Table 2. Distribution by category of the projects approved for implementation as part of the Przemyśl civic budgeting programme

Years	Projects approved for implementation*	1st category	2nd category	3rd category
2013	4	4	0	0
2014	6	6	0	0
2015	5	5	0	0
2016	27	0	27	0
2017	27	0	27	0
2018	32	0	32	0
2019	37	3	22	12
2020	37	4	21	12
2021	32	2	18	13
2022	41	6	21	14

* Projects voted on in a given year which were implemented in the following year.

Source: own study based on: www.przemysl.pl; https://bip.przemysl.pl/55177/budzet-obywatelski.html; https://przemysl.naszemiasto.pl/

The data contained in table 2 demonstrates that the number of 1st-category projects approved for implementation varied between 2 in 2021 to 6 in 2014 and 2022, with the selected projects focusing on technical infrastructure. The highest number of projects submitted by residents pertained to individual housing developments. Their focus was on the development of both technical and social infrastructure. There was an increase in the number of 3rd-category submissions (only soft projects), which were voted on in 2019 but implemented in 2020.

Due to a lack of uniform criteria of classifying the projects submitted in the analysed period into the three categories, this paper only analyses the period from 2019 through 2022.

Table 3. Categorisation of submissions into hard and soft projects

Years	2019	2020	2021	2022
Projects approved for implementation – total	37	37	32	41
1) 1st category	3	4	2	6
2) 2nd category, including:	22	21	16	21
- technical infrastructure	13	13	8	14
- social infrastructure	9	8	8	7
3) 3rd category, including:	12	12	13	14
- social projects	2	1	1	0
- cultural projects	4	5	7	10
- educational projects	2	2	2	1
- sports-related projects	4	4	3	3

Source: own study based on: www.przemysl.pl; https://bip.przemysl.pl/55177/budzet-obywatelski.html; https://przemysl.naszemiasto.pl/

A detailed assessment of the 'winning' projects in every category provides insight into resident preferences regarding the projects selected, as well as the shifts in these preferences across the various editions of the civic budgeting programme. An analysis of the data contained in table 3 demonstrates that the 2nd category is dominated by hard projects focused on technical infrastructure development. These projects primarily pertained to the alteration and modernisation of main traffic routes, including pedestrian and bicycle routes, as well as the construction and expansion of parking and recreation facilities and lighting. Social infrastructure projects primarily involved the construction and upgrading of playgrounds and outdoor gyms, as well as the modernisation and better equipment for public parks. The 3rd category consisted of social, cultural, educational, as well as sports and recreation-related projects. The projects which were the most popular among the residents of Przemyśl were those related to culture (theatre performances, film screenings, picnics and concerts), sports and recreation, although to a smaller degree compared to the former (bicycle races, tournaments, sports days and healthy lifestyle promotion).

The voting on individual projects was conducted electronically, as well as using traditional means in dedicated locations across the city. The total number of votes, share of voters to the total number of people eligible to vote as well as the number of invalid and electronic votes, is presented in table 4. In certain years, no detailed voting data was collected.

Table 4. Distribution of votes cast by the residents of Przemyśl

Years	Total number of votes	Share of voters to total number of people eligible to vote (%)	Number of invalid votes	Number of electronic votes
2013	8628	13,6	b.d	b.d
2014	16888	26,3	b.d	b.d
2015	9514	15,1	b.d	b.d
2016	b.d	-	b.d	b.d
2017	b.d	-	b.d	b.d
2018	b.d	-	b.d	b.d
2019	10955	17,9	b.d	b.d
2020	19612	33,5	1332	9766
2021	21132	36,7	1332	5 977
2022	20595	36,1	1158	4 673

Source: own study based on: www.przemysl.pl; https://bip.przemysl.pl/55177/budzet-obywatelski.html; https://przemysl.naszemiasto.pl/

From 2013, a gradual increase in the number of voters could be observed. The number of voters in 2022 was higher by approximately 138,7% compared to 2013. The percentage share of voters in relation to the total number of people eligible to vote increased from 13.6% in 2013 to 36.1% in 2022. This increase in voter turnout indicates that the residents of Przemyśl are more interested in how their space is managed, and want to co-decide on how public funds should be spent. In 2020, the number of votes cast electronically was markedly higher due to the pandemic, with on-line votes constituting nearly half of all votes cast.

In the case of every year analysed, the resolutions of the Przemyśl City Council specified the schedule and amount of funding available for allocation to public projects as part of the civic budgeting programme. The ultimate amount of funding allocated to projects was subject to change by the Przemyśl City Council, as specified in the city's budget resolution. The funds made available by the municipality for civic budgeting came entirely from the municipal budget – the civic budget structure prevents submission authors from contributing their own funds, or the utilisation of funds from any other sources. The amount of funding allocated to the Przemyśl civic budgeting programme is presented in table 5 and figure 2.

The amount of funds allocated to the Przemyśl civic budgeting programme has been gradually increasing since 2014. In 2018 and 2019, the total amount of utilised funds was similar to the total available pool. From 2015 to 2017, the final cost of the projects was slightly higher than the planned budget. In 2021, on the other hand, the actual implementation costs were significantly lower than estimates based on previous years. However, it is important to note that this was influenced by the pandemic. Although a change introduced to Polish law in 2019 set the minimum amount at 0.5% of the municipality's total expenditures based on the municipality's last budget statement, this did not affect Przemyśl.

Table 5. Amount of funding granted to the Przemyśl civic budgeting programme

Years	Amount of funds, which the commune planned to allocate for the implementation of projects selected by the residents (in PLN)	Amount of funds actually allocated (in PLN)	Participation of the civic budget in the municipality total expenditures (%)	Amount of civic budget funding per resident of Przemyśl (in PLN)
2013	-	-	-	-
2014	1.000.000,00	788.235,97	0,21	12,43
2015	1.500.000,00	1.515.364,19	0,44	24,20
2016	1.500.000,00	1.541.289,64	0,46	24,80
2017	1 665 103,00	1.665.353,54	0,19	26,94
2018	1 703 676,00	1.630.255,81	0,16	26,62
2019	1.950.000,00	1.895.048,12	0,48	31,23
2020	1.960.000,00	1.731. 836,46	0,41	29,55
2021	2.260.000,00	1 046. 146,65	0,23	18,17
2022	2 100 000,00	1 816 856,00	0,36	31,87

Source: own study based on: www.przemysl.pl; https://bip.przemysl.pl/55177/budzet-obywatelski.html; https://przemysl.naszemiasto.pl/
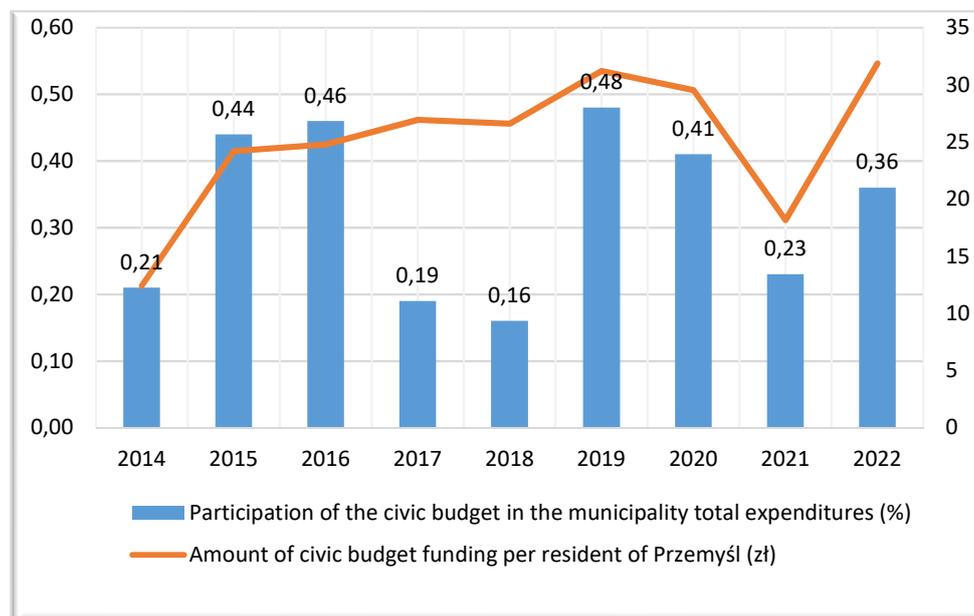


Fig. 2. Share of the civic budget as part of the Przemyśl municipal budget and the amount of funds per resident

Source: own study based on: www.przemysl.pl; https://bip.przemysl.pl/55177/budzet-obywatelski.html; https://przemysl.naszemiasto.pl/

An analysis of the amount of civic budget funding per resident of Przemyśl (Table 5) demonstrates that the amount varied between PLN 12.43 in 2014 to PLN 31.87 in 2022. This means that it gradually increased in the analysed period (with the exception of 2020 and 2021).

4. CONCLUSIONS

Challenges faced by local governments drive managers and local administration employees to increasingly make use of methods facilitating their functioning. One such method is the active involvement of local communities in public life, as resident engagement in local decision-making has for many years been underutilised in Poland. Offering citizens opportunities for active participation in decision-making processes is becoming a sign of the times, and such values as local-level social dialogue and effective local co-governance are becoming a fundamental element of public management (Ostałkiewicz, 2015; Rachwał, 2018; Roberst, 2004).

A key instrument of involving residents in the development of cities and fostering community awareness is civic budgeting. Since its inception in 2013, the Przemyśl civic budgeting programme has resulted in the implementation of approximately 244 projects whose total value is nearly PLN 14 million. In the analysed period, the number of projects submitted by the residents, as well as the number of voters, was observed to steadily increase. This indicates that the local community is becoming more involved in the life of the city. A rise in community awareness and the need to organise and cooperate could be observed. The overarching goal of the project, which was to increase citizen engagement by encouraging them to participate in public life and co-decide on the allocation of public funds, has thus been achieved.

The majority of the projects selected by the residents involved the construction or modernisation of technical infrastructure, although with a recent increase in the number of soft projects. The latter are dominated by projects related to culture, sports and recreation. This reflects the needs of the Przemyśl community, which would like its environment to be a good place to live.

The results of the study can find application in facilitating the functioning and management of local administration offices. Examples of this are the selection of effective forms and instruments of social participation, implementing organisational efforts and even forcing certain changes, including institutional changes. The data may serve as the basis for pursuing an effective public policy, including the development of appropriate strategic programmes and projects. It is important that civic budgeting becomes a legitimate form of collaborative decision-making for residents and local authorities, facilitating the identification of important needs of residents, and fostering in them a sense of responsibility for the common good.

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DIVERSITY MANAGEMENT AS A CHALLENGE
FOR TODAY'S MANAGERS

With the challenges that modern organizations face (Mulgan, 2009), diversity management becoming a major issue for managers – from recognizing diversity (identifying it, making people aware of its importance) to planning an effective strategy to manage it. This also requires a deeper understanding of diversity and social inclusion. Many research studies (Gross-Gołacka, 2018; Kuldova, 2012) show that in the 21st century, the success of any organization – regardless of size or industry – will depend on how it manages diversity. Organizations that make diversity management part of their business strategy will be successful. So far, including in Poland, diversity management issues have not been the subject of many specific studies. Diversity management concepts are not implemented reliably in organizations due to a lack of knowledge, analysis, and conclusions. This article aims to identify possible gaps, and cognitive and empirical problems in assessing the preparedness or maturity in diversity management of employers in Poland.

Keywords: diversity, diversity management, analyzing diversity in organizations.

1. INTRODUCTION

The modern world has shrunk to the size of a 'global village' (Fukuyama, 1996): geographical distance keeps losing its importance, and national economies are merged into an integrated global system and as such become interdependent. As a result of economic integration, increased migration processes and the circulation of ideas, some cultural differences are being blurred and others accentuated, and this is becoming apparent between and within societies.

Many factors such as: demographic changes (population growth, increased social mobility geographically and professionally, ageing population, significant changes in the structure by age, negative birth rate); globalisation of markets or operation of companies in different countries; cultural evolution; technological development, information society, networking; as well as legal issues related to discrimination (equal opportunities policy, anti-discrimination law) are causing the work environment to become more and more diverse; a growing number of companies and institutions consider diversity management as

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one of the necessary elements of their HR policy and development strategy. Knowledge and competences in diversity management become indispensable, because as a result of globalisation processes management occurs in conditions of cultural diversity (Kostera, Śliwa, 2010). This article aims to identify possible gaps, and cognitive and empirical problems in assessing the preparedness (maturity) of employers in diversity management in Poland.

2. DIVERSITY MANAGEMENT AS A CHALLENGE
FOR TODAY'S MANAGERS

With the challenges that modern organisations face [see Mulgan, (2009)], diversity management becomes a major challenge for managers – from recognising diversity (identifying it, making people aware of its importance) to planning an effective diversity management strategy. Nevertheless, this requires a deeper understanding of diversity and inclusion. Diversity management is a journey of continuous discovery of people and their contributions and the value they can give to an organisation and to society. Diversity should be seen as a reality, not a concern. Indeed, it is a multidimensional concept. Diversity is defined by the mix of many features – differences and similarities – that employees bring to an organisation. These features include age, gender, (in)disability, race, ethnicity, religion, but also education level, family structure, position, geographical location, style and values, so those visible features and those invisible. Diversity should be defined as the recognition, understanding, acceptance and appreciation of differences between people, both those that are features and those that result from experience. Diversity is all the differences people bring to an organisation or group. Such an approach to diversity – recognising the benefits of that diversity – will measure the quality of management. Maximising diversity and benefiting from it in an organisation is an essential issue for today's management quality (Gross-Gołacka, 2018).

Organisations use diversity to become more creative and open to change. Many research studies (Gross-Gołacka, 2018) show that in the 21st century, the success of any organisation – regardless of size or industry – will depend on how it manages this diversity. Organisations that make diversity management part of their business strategy will be successful.

The benefits of employing diverse employees are numerous: from better financial performance and more innovative ways of solving problems to effective employee retention (thus reducing staff shortages and turnover) or making your company, products, and services more attractive to customers and various external partners. But, again, diversity is also a challenge for organisations. Conflicts are inevitable, as are the costs that a company bears when introducing flexible forms of management, specialised training or integration undertakings. Diversity in the working environment affects the culture of an organisation and implies the need to adapt management methods to the requirements of cultural diversity, which in turn requires specific intercultural competences among modern managers[2].

To conclude, the answers to basic management questions are culturally determined (Sułkowski, 2002); moreover, they are related to institutional, legal and social conditions. Moreover, diversity management is a multidimensional and dynamic topic; it requires

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[2] The ability to manage teams of diverse employees in terms of age, race, and gender, among others, is already becoming common practice in global companies (Pocztowski [scientific editor], 2015).

interdisciplinary competences: it draws on knowledge from economics, psychology, philosophy, and sociology, which should be given special attention in curricula for training contemporary managers sensitive to diversity.

It is therefore worth being aware, it is worth knowing what influence the following can have on an organisation: the culture of its employees or business partners[3]; the institutional and legal solutions that form the background for the organisation's functioning; the political and economic situation in the country where the company's headquarters or market or business partners are located. This knowledge can often determine the success or failure of a company in business negotiations, setting the terms and conditions of cooperation when signing contracts.

3. FROM COMPENSATORY MEASURES TO DIVERSITY MANAGEMENT

The development of the diversity management concept was a response to demands expressed by movements fighting for their rights and equal opportunities in the mid-twentieth century in the United States. The idea of equality was simultaneous with real inequalities: which affected slaves, labourers, women, and different cultural groups – it was a response to these inequalities. Approaches to equality and diversity have evolved over the last 50–60 years: from compensatory measures (1960s and 1970s) to valuing differences (1980s) to diversity management and 'living' diversity (today). The term 'diversity management' was first used in the US in the 1980s, and not until the 1990s, the recognition of the demographic changes occurring and their consequences for economies caused organisations to address diversity issues for reasons of profit and innovation, rather than fear and the need to comply with laws or respect ethical values. On a larger scale, the concept of diversity management in organisations only emerged in the late 20th century – as a recognition of the economic benefits ofeffectively managing diversity among an increasingly diverse workforce (see Gross-Gołacka, 2018).

In the 1990s, the integration of diversity management into education, research and practice worldwide was also initiated. This issue has gained popularity as a new management approach in the USA and Europe. It began to spread to the rest of the world: Australia, Canada, New Zealand, European and Scandinavian countries. In Poland, changes toward diversity management are relatively slower. Organisations recognise the diversity of their human resources and the need to implement equality and diversity solutions, and the actions taken in some companies in Poland are not only the result of the need to adopt internal regulations to the provisions of the Polish Labour Code. Planning and applying solutions based on long-term thinking start to emerge, which makes it possible to see the benefits of a personnel policy that takes diversity management into account (Firma = = różnorodność [*Company = Diversity*], 2009).

Basically, diversity management is not about giving preference or just levelling the playing field for individual members of a group, but about more than that – it is about recognising that diversity in its broadest sense enhances the quality of the whole organisation. Diversity management always has a broader scope and is about improving

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[3] American companies place the interests of shareholders (usually) highest in the hierarchy of their values; Japanese companies – the interests of their customers; Swedish companies – the interests of their employees. Therefore, the criterion for success in the first case will be the ability to pay high dividends to shareholders, in the second one – to consolidate market share, in the third one – to ensure permanent and secure employment for employees.

organisational culture. It is a more advanced holistic approach. It does not just focus on women and minorities, but addresses the needs of an entirely diverse workforce, aiming to create an environment that works naturally within that diversity.

An equal opportunities policy stems from outside the organisation – it is enforced by legislation, it focuses on discriminated employees; while diversity management comes from inside the organisation, as an initiative to fully integrate diversity into the company culture; it recognises the potential of human differences and can skilfully exploit them. Diversity management concerns all employees, not only *disadvantaged* groups. Equating diversity management with human resource management and differentiating a team based on one of the diversity dimensions (e.g. gender, age, (in)disability etc.) is wrong. Diversity management is a holistic and inclusive strategy for all employees regardless of their individual traits, positions held, competences etc. Diversity management is not only about counteracting discrimination in the workplace and creating a friendly working environment for all groups (regardless of age, gender, ability, race, religion, beliefs). Diversity management is the company's strategy and management of an organisation that is willing to have an open dialogue, to discuss with its employees their competences, aspirations, personal and professional goals and values with respect to the mission, objectives and needs of the organisation and their translation into expectations from the employee. Programmes and procedures introduced as part of a diversity management strategy should respond to real needs (problems), considering all employees' needs, not only those of disadvantaged groups. In addition, each time before introducing solutions, an analysis of their impact on the situation of different groups of employees should be carried out. This is important because poorly formulated objectives and tools for achieving them (programmes, procedures) may cause a lack of understanding among some employees or cause misunderstandings and conflicts. In light of these issues, it seems that no market player today can afford to overlook the diversity of its customers, suppliers, shareholders and employees – if it wants to achieve its goals successfully.

4. IDENTIFYING 'WHITE GAPS' IN DIVERSITY MANAGEMENT CONSIDERATIONS, ANALYSIS AND RESEARCH

For the last 40 years or so, there has been an increasing number of publications worldwide on diversity management and its impact on the success of organisations and how to implement it. However, research on this topic appears to be insufficient and unsystematic. Even large studies fail to clearly identify appropriate measurements and metrics (Gross--Gołacka, 2018; Stahl at al, 2009). Diversity management has been present in Polish science for only a few years. Elwira Gross-Gołacka (2018) analysing the development of diversity management policies in Poland (and abroad) identified a significant gap in the area of consideration, analysis and research on this issue.

Diversity management issues have (so far) not been the subject of specific and numerous studies (also in Poland). Diversity management concepts are not implemented reliably in organisations due to a lack of knowledge, analysis and conclusions. Conclusions from partial studies are 'scattered' across publications or information materials where, with too little promotion of the issue among managers and employees, they are used to a limited extent (see Gross-Gołacka, 2018). Admittedly, research and analysis are being conducted, and more is happening on the subject, if only considering all the initiatives related to the

promotion of good practice examples[4], but the subject is burdened with numerous methodological and cognitive problems. For example, diversity management is only one of the many factors that contribute to improving organisational performance (e.g. higher productivity may result from better-motivated employees; it may be the result of changes in work organisation or new technologies, or it may be the implementation of solutions that consider the needs of a diverse workforce; or it may not be possible to see clear changes/benefits regardless of the changes made, because the company is strongly influenced by factors such as prices of raw materials, level of customer demand, global changes beyond the company's control, etc.). – this raises the question of how to measure the benefits of implementing diversity management, how to monitor and analyse diversity in an organisation? In addition, the amount of 'hard data' is poor and the sensitivity of commercial data often prevents the publication of some company studies or restricts access to data necessary for analysis. These are just some of the dilemmas of measuring diversity in an organisation. Therefore, the completion of such research makes a great contribution to filling the existing knowledge gap in the field of diversity management in Poland and to the development of reliable and accurate analysis tools.

The research available in the reference literature suggests that preparing employees to operate in a multicultural environment is not one of human resource management priorities. This is evidenced by the low percentage of companies with formal procedures in this respect. In a way, this is a pointer and a challenge for training programmes, among others for future managers. Competences related to understanding diversity and multiculturalism, ethical commitment, understanding cultures and customs of other countries concerning discrimination and diversity management in organisations should be central in the training of future managers.

The domestic empirical research can be reduced to a few basic conclusions:

- The state of diversity management implementation in Polish companies is quite low, but respondents recognise the need for it (Lisowska, Sznajder, 2014; Lisowska, Sznajder, 2013). They also recognise the benefits of introducing diversity management, but are aware of the insufficient knowledge and practice of implementing, monitoring and analysing diversity in the organisation. Management staff often associate diversity management strategy and equal opportunities policies with each other or use them interchangeably. In contrast, diversity management strategy is a broader concept than equal opportunities policy. Diversity management is not just a political category (equal opportunities/affirmative action policies have been like that – they have been enforced by law); in fact, it is a strategically important resource. Nevertheless, it is still sometimes associated with equal treatment or anti-discrimination. But this is a simplistic connotation. The existing differences between diversity management and affirmative action/equal opportunity policies are debated in the academic literature. The two approaches are related but quite different. They show progress in the development of equality in organisations: from affirmative action (equalisation) through equal opportunity policies to diversity management.

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[4] For example, the Diversity Index Project implemented by PKPP Lewiatan together with the preparation of a self-assessment tool of the company (Diversity Index): https://odpowiedzialny biznes.pl/karta-roznorodnosci/aktualnosci-karta/barometr-roznorodnosci-i-wskaznik-diversity-index/ and www.diversityindex.konfederacjalewiatan.pl.

- Diversity management is part of the search for new, more effective tools for dealing with the uncertainty of the environment and the speed of change, but effective use of diversity management requires more skills from managers (at different levels in the organisational structure) than before; involvement of all employees (regardless of their position in the organisational structure) – as an inclusive strategy, it includes not only the internal environment of the company, but also the external environment; a strategy that covers the whole organisation, not just selected aspects (e.g. recruitment and selection). For diversity management to be implemented successfully, all levels of management in an organisation must be sensitised and involved in diversity issues, which is not always a straightforward process. The decision to implement a diversity management policy as part of the organisation's day-to-day management is the responsibility of senior management. These are the decision-makers responsible for the strategic development of the organisation. Middle management is responsible for implementing diversity management as part of its direct management of employees/workers. Management staff needs to be adequately prepared for implementing diversity management policies. This preparation of middle management in implementing diversity management (conviction of the concept, examples of good practice) is often lacking.

In Poland, diversity management is still rare. Polish companies (more often the larger ones or those with foreign capital) undertake numerous activities aimed at levelling opportunities, increasing competitiveness, skilful talent management, better-achieving goals, but only a few have decided to implement the concept of diversity management (*Zarządzanie różnorodnością…*, 2022; *Sygnatariusze Karty*, 2023).

5. EVALUATION OF ACTIONS TAKEN

Another important issue related to the implementation of diversity management (as any other project or initiative) in an organisation is the process of analysis and monitoring of activities. This is about possible, available tools for evaluation of activities implemented so far. Measuring diversity and diversity management practices is perceived as the first step to effective diversity management, which is treated as a tool for assessing an organisation's starting point (Gross-Gołacka, 2018).

For most companies, analytics in HR is still new. Analytical data are of low quality and incomplete (often reduced to figures on the socio-demographic structure of employees without qualitative analysis of these data), and shortage of qualified persons to carry out such analyses. Evaluation performed by management is not objective and does not provide full knowledge of events and relationships occurring at different levels of the organisational structure. There are many different ways to collect data, e.g. on seniority structures, exit interview mechanisms, staff turnover rates, incidents of discrimination, number of training and other initiatives to improve staff competences and others. Despite the plethora of possible data to be analysed, the issues of monitoring data on diversity policies in organisations in Poland still belong to the exceptions and are not systematic and regular in nature. The ability to analyse and monitor HR is a big gap in organisations and at the same time a big future, because it is a skill set for human resources management, operations and leadership. This knowledge will enable the company to build a competitive advantage through a better understanding of all aspects of the workforce and to exploit the potential inherent in diversity.

For example, job satisfaction should be considered as a psychosociological category. It is composed of many material and non-material factors. The feeling of satisfaction determines a certain attitude of the employee towards the job, the entrusted duties, or the workplace (specific company). Employee satisfaction surveys are an excellent tool for finding out what the staff think about different aspects of the company. They can be conducted cyclically, providing systematic monitoring of employees' needs and on a one-off basis – collecting information needed, for example, to introduce important changes in the company or to learn about the employees' opinions after their implementation. Crucial is to obtain the answers to the evaluation questions and their statistical presentation and analyse these answers according to the socio-demographic characteristics of the people employed (gender, age, (in)disability, family situation, sexual orientation, other characteristics). Besides, if the collection of data on employees is to be followed up with real action.

There are different areas and tools for internal analysis of the level of diversity in an organisation. For example, regular monitoring of the situation in terms of the structure of the employed staff, will show in an objective way how the employment is shaping considering the criterion of gender, age, (in)disability and possibly other demographic and social features and positions, to be able to recruit employees properly, implement development programmes addressed to specific groups. The analysis of the employment structure allows the company to determine the demographic profile of its organisation; to monitor the career paths of its current employees; to monitor newly recruited employees, dismissed employees, redundant employees, employees approaching retirement age. Monitoring of salaries and promotions is also potential as an assessment tool, providing information on how salaries are shaped at different levels and positions in the organisation. Other actions which the company can initiate: appointment of an ethics officer, training of managers in intercultural competences in a broad sense; additional technological solutions, additional development training for marginalised groups; support for internal events, especially those of a bottom-up nature, etc. When an organisation has a strategic approach to diversity management, it attaches great importance to monitoring, evaluating, and assessing the activities or solutions implemented.

In conclusion, this article contains more questions than ready-made solutions. But that is precisely its purpose: to identify gaps and cognitive and empirical problems in assessing employers' preparedness (maturity) in diversity management.

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Eugeniusz MOCZUK[1]

DYSFUNCTIONAL AND SOCIO-PATHOLOGICAL PHENOMENA IN POLICE FORCES: A HEURISTIC APPROACH

Police forces, as a social institution, are not free of various types of socially disadvantageous behavior and phenomena. Such occurrences entail dysfunctional and socio-pathological phenomena; that is, phenomena that violate universally accepted norms, values, principles, and rules. Such instances must be intentional; that is, conscious and purposeful, not accidental or non-culpable. They must also be repetitive; that is, occurring more than once. The subject of this study is selected dysfunctional behaviors and occurrences of social pathology among individuals in the police environment; their essence involves individual "suffering" that exhibits specific phases and leads directly to the destruction of personality. The study discusses such issues as suicide, alcohol problems, drug addiction, and domestic violence.

Keywords: Police, dysfunctional behavior, socio-pathological phenomena, suicide, alcohol problem, drug addiction problem, domestic violence.

1. INTRODUCTION

The police forces have for years constituted the subject of interest for representatives of various sciences, while their research achievements have contributed to the knowledge about this formation (Czebotar, Gądzik, Łyżwa, Michałek, Świerczewska-Gąsiorowska, Tokarski, 2015; Hołyst, 2013; Letkiewicz, Majer, 2010; Misiuk, 2008; Misiuk, 2008a; *Od Straży...,* 2007; Opaliński, Rogalski, Szustakiewicz, 2015; Pieprzny, 2007; Prawo policyjne, 2014; Sprengel, 2008). Sociology has also joined the scientific analysis in this field. On the grounds of sociology, two research trends have emerged, i.e. the sociology of uniformed public services (Maciejewski, 2014) as well as the sociology of police (Moczuk, 2006; Moczuk, 2013) whose subject of research is the police. The first trend involves an institutionalized sociological subdiscipline, while the second falls within its framework. (Moczuk, 2013a) It should be mentioned that the process of sociological subdiscipline institutionalization is connected with the broadly-understood changes taking place in contemporary sociology, where scientific interests result from undertaken sociological

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analyzes of the contemporary postmodern (Moczuk, Jedynak, 2018), which is associated with existence of a 'third sociology'. Piotr Sztompka, the creator of this approach to sociology, believes that the third sociology entails the sociology of everyday life, which is oriented at every-day reality and addressed to 'ordinary' people (Sztompka, 2008).

It should be added that the police, and especially its positioning within the social structure, outright requires such analytical and research interaction to be undertaken, which can be adapted to the present day, without ignoring even the most unpleasant issues. In addition to the police tasks resulting from legal provisions (The Police Act, 2020), it should be noted that police officers not only represent state authority, but as people who live in specific local communities, are also part of the society, having institutional and personal relationships, and are members of primary groups, including families, peer groups, etc. As such, not only they are 'social actors' working in law enforcement bodies, but also spouses, parents, and members of communities. They therefore behave in accordance with the normative systems developed, including the moral, customary, religious and legal ones (Kojder, 2016; Pieniążek, Stefaniuk, 2014), which means that they behave like other members of the society, not only by complying with specific norms, but also by breaking some of those standards, inter alia by abusing alcohol, using illegal psychoactive substances, committing crime or suicidal acts, accepting the dysfunctions in the institutional system, abusing power, or other behaviors.

Assuming that the third sociology provides such research and analytical possibilities, a need has emerged to reflect on the issues of dysfunctional and pathological phenomena that may occur in the environment of the persons associated with the police. This not only results from the fact that a need exists to analyze this phenomenon from the practical perspective, but also because these issues have been increasingly raised in science (Dudek, 2020; Działoszyński, Szymborski, Wójcik, 2007; Maj, 2013; Moczuk, 2015; Węgliński, Dziugieł, 2015).

The subject of the study is to present selected sociological aspects of dysfunctional and pathological phenomena in the police environment, where selected behaviors in this respect have been discussed (Kwaśniewski, 1970). The aim of the study is to present the basic literature on dysfunctional behavior in the political environment, which can be used in the preparation of individual studies on this subject. To achieve this goal, the Scoping Reviews research method. This method, otherwise known as scope review, is a qualitative research method that is included in the Systematic Literature Review, characterized by a high degree of formalism and a qualitative method of analysis. It is a kind of "mapping technique" of selected literature on a given subject, a special specific query of the literature of the subject (Chylak, Głowik, 2019; Ćwiklicki, 2020; Mazur, Orłowska, 2018; Orłowska, Mazur, Raguna, 2017).

It is also crucial to define the dysfunctional behaviors and pathological phenomena, even though such analysis will not be undertaken in this study, due to editing restrictions. Nevertheless, a brief interpretation of these issues has been made, in accordance with the division proposed by Anna Nowak and Ewa Wysocka, in which three groups of such phenomena have been distinguished: a) various phenomena of individual nature, including suicide, alcohol problems, drug addiction, domestic violence; b) 'group' phenomena, including extreme behavior in professional situations, lack of readiness to oppose illegal influence and mobbing; c) institutional phenomena, including corruption and the use of the professional position for one's private needs (Nowak, Wysocka, 2001). This division, however, is so conventional, that each of these phenomena can be assigned to more than

one group. Other behaviors, such as offenses against property, health and life, behavioral addiction, the use of suspected person's difficult position to gain personal and property benefits, the use of operational knowledge for personal gain, as well as pocketing special purpose (operational) funds, have not been discussed.

As mentioned above, due to editing restrictions, this study constitutes the first of three parts, divided into smaller, separate, but substantively and intentionally integrated articles. Admittedly, each part is autonomous, although they should be read as one piece. The first part presents selected dysfunctional and socio-pathological phenomena of individual nature observed in the police environment, the second part presents 'group' dysfunctional and pathological phenomena occurring in this environment, while the third part discusses institutional phenomena.

2. SELECTED DYSFUNCTIONAL AND SOCIO-PATHOLOGICAL PHENOMENA OF INDIVIDUAL NATURE IN THE POLICE ENVIRONMENT. OUTLINE OF THE ISSUES

Anna Nowak and Ewa Wysocka indicate existence of at least three groups of phenomena, including: a) various phenomena of individual nature, the essence of which entails individual 'suffering', having specific phases and leading directly to destruction of personality; b) 'group' phenomena, the essence of which entails a breakup of group ties and supra-individual harmfulness; c) institutional phenomena, the essence of which entails poor functioning of social structures (Nowak, Wysocka, 2001).

It should be noted, however, that police work is closely related to performance of tasks that are characterized by the risk of losing health and even life. The occupational risk factors affecting police officers fall within the specific properties and characteristics of this professional group as well as within the properties and tasks associated with a formal organization or an institution. Among the most characteristic psychological features characterizing police officers, the following can be distinguished: a) risk is a sort of challenge and constitutes an important work-motivating factor; b) competitive attitudes as well as pursuit of success and achievement; c) existence of various forms of aggression that are acceptable by police officers when solving problems, while the broad limits of its use in interpersonal contacts are tolerated (Sokoluk, 2007).

As Ian Hesketh and Noreen Tehrani indicate, changes in the perception of threat have in recent years obliged the police forces to act counteractively towards crime, not only in the traditional sense. Due to the fact that electronic methods of reporting crime have dominated the citizens' contacts with the police, the use of the Internet and social media to analyze various phenomena has been intensified. Therefore, police officers, focusing on Internet exploration, on the one hand, have less interpersonal contacts with citizens, but on the other, they come across, frequently virtually, such phenomena and situations, which previously comprised the domain of specialized police forces only, including criminal or investigation forces. Police officers are additionally obliged to actively contact the people who break social norms, respond to cases of alcohol violence or domestic violence, as well as participate in disaster-related actions and respond to accidents or collisions in which people's lives and health have been lost. As such, police officers may experience stress and trauma, and thus health and well-being disturbance (Hesketh, Tehrani, 2018).

One important element of a police officer's professional work is stress, which is often relieved by a variety of behaviors, such as alcohol drinking, drug taking, and even suicide

(Murtagh, 2010). According to Wiesław Sokoluk, the stressors in police work include: a) the rigid, hierarchical organizational structure that requires discipline and subordination, but also creativity, flexibility or originality in approaching given social problems; b) the ever-present conflict associated with the perception of the real and the imagined gratification and promotion criteria; c) the constant availability, along with the unpredictability of professional involvement time, which hinders the relations in the sphere of personal--professional life; d) the constant threat to health and life, which mobilizes one to act, but raises a 'demand for adaptive aggression', and also exhausts the human defense capabilities, often due to short interval between two traumatic events; e) permanent or temporary contact 'with the dark side of life' (e.g. crime, drug addiction, prostitution and other phenomena), which in the absence of supervision causes some to take advantage of illegal behavior or services etc.; f)compensating for the low social recognition of the police work, through specific dysfunctional behaviors (Sokoluk, 2007).

Quite importantly, intensely manifested stress and trauma may occur in at least three police groups, including: a) officers who first respond to incidents and events, especially those who arrive at murder and suicide sites, accident and road collision sites, as well as at places where corpses are found, b) specialized officers dealing with domestic violence, violence against children, but also those counteracting terrorism, hunting dangerous criminals and arms or drug dealers, as well as those who work undercover and undertake secret activity; c) officers involved in activities related to the securing of catastrophe sites and events of a significant scale (Hesketh, Tehrani, 2018, p. 6). Each of these activities is 'charged' with a significant level of stress and trauma, which not always can be discharged in a 'normatively neutral' manner.

Accordingly, while undertaking analysis of dysfunctional behavior and socio-pathological phenomena of an individual nature, the issue of suicide can be addressed first. Suicide is a very socially-complex phenomenon, because suicide not only is targeted at the person committing this tragic act, but also at the fundamentals of social existence. Emile Durkheim believed that suicide means all deaths that directly or indirectly result from the victim's act, who knows what result it entails (Durkheim, 2011). Brunon Hołyst, describing suicide, introduced the term 'suicidal behavior', and called the science of suicidal behavior suicidology. Addressing suicidal behavior, the author indicates existence of a sequence of reactions triggered in a person when suicide appears in his/her consciousness as a desired state of affairs and constitutes the objective of action (Hołyst, 2002). According to this author, suicide is a type of voluntary death that results from a conscious decision of a given person (Hołyst, 1999). Robert Merton, in turn, refers to suicide as the most drastic form of an individual's adaptation to society, i.e. withdrawal. Withdrawal consists in rejecting both the goals set by the culture and the allowable means to achieve them. According to Robert Merton, withdrawal is the rarest and the most condemned type of reaction to the state of anomy, which means a breakdown in the cultural structure, occurring particularly when there is an acute disjunction discrepancy between cultural norms and goals and socially structured capacities for group members to act in accord with them (Merton, 1968).

Brunon Hołyst is convinced that the police are a professional group most threatened with the risk of suicide (Florkowski, Flinik-Jankowska, Gmitrowicz, Gądek, Krajewska, Zboralski, 2015; Florkowski, Gądek, Łacisz, Zboralski, 2015). It should be noted that before 2005, the suicide rate among police officers was almost twice as high as in the population of Poles. Only after 2005 the indicator 'leveled out' to the national level and amounted to 12 suicides per 100000 persons (Hołyst, 2011), whereas today it is even lower.

Characteristically, earlier Polish suicide rates were similar to those recorded in the US police, which amounted to 22 suicides per 100000 police officers (Stock, Kelly, 1994). It ought to be pointed out that the most common form of suicidal death among police officers is shooting oneself. According to Mark H. Chae and Douglas J. Boyle, in the US, about 80–90% of law enforcement officers commit suicide using service weapons. In the years 2003–2007, more than 80% of all suicides in the New Jersey police force was committed using firearms, while out of 80 suicides committed by New York police officers, as many as 94% were associated with shooting oneself (Chae, Boyle, 2013). It is also significant that American studies confirm the relationship between the police officers' possession of firearms, regardless of the cause of suicidal behavior (Violanti, Owens, McCanlies, Fekedulegn, Andrew, 2019). Typically, almost all police officers who committed suicide were under the influence of alcohol and at the same time had ongoing problems with alcohol (Jablonski, 2012). Statistical analyzes show that in Poland suicide in the police force is most often committed by non-commissioned male officers aged 20–40, with 4–15 years seniority, whereas the place of suicide is their own home, while the most common way of committing suicide is shooting oneself using a service weapon (Piotrowicz, 2006), as confirmed by American observations.

From a scientific viewpoint, analysis of police officers' suicidal behavior entails two perspectives. The first one is associated with the science of suicide – suicidology, and the second with the sociological concept of uniformed public-service groups. The first indicates what suicide is, what are its types and kinds, as well as what consequences it entails. Consideration of suicide 'rationality' involves assessment of the positive and the negative consequences of suicide decisions as well as drawing conclusions regarding whether this act is be beneficial (or not) and for whom. The key element in this assessment is the impact suicide has on others (Kelly, Dale, 2011). The second involves consideration of how a paramilitary uniformed public-service officer's social patterns translate into suicidal behavior (Ostasz, Moczuk, 2018). It should be underlined that a suicide committed by police officer's is a problem not only for the immediate family, but also for the Police as an institution. This is due to the fact that in the event of a suicidal death, the immediate family is convinced that the reason for it entailed improper service conditions and, above all, improper professional relations. Investigators, in turn, look for the causes of death in the victims' personal or family life. What is more, the loved ones are convinced that stressful work is the reason, where stress is relieved by alcohol, and when this does not help, by auto-aggression. There is also the 'myth of a police officer being a tough person', which leads to psychological internal conflicts when officers behave differently than everyone else and when they are misunderstood by their environment. They then close in on themselves and block their emotions, which can cause loneliness, and consequently neuroses or depression, potentially leading to suicide. Police service also requires 'legally sanctioned' aggressive behavior, which must be always monitored. There are persons, however, who are unable to release emotional tension in extremely stressful situations, often associated with direct threat to their lives and health. There is also the issue of 'occupational burnout', which occurs after a long period of working under stressful conditions, which leads to closing oneself to others and to 'developed cynicism' as well as to physical and mental fatigue (Baranowska, Wiciak, 2007).

The etiology of suicidal behavior among police officers mentions the following variables: a) the fact that the profession is dominated by men (men commit suicide more often than women); b) the fact that police officers have easy access to weapons and are able

to handle guns; c) the fact that police officers are under constant stress, due to the risk of losing their lives or health; d) too great involvement in work, which causes family conflicts; e) the social hostility towards the Police as an institution, as well as exposure to social criticism; f) existence of bad social workplace relations, irregularities, objections, as well as irrational decisions of superiors, prosecutors, judges, which negates the work ethos (Baranowska, Wiciak, 2007).

Another phenomenon that can be encountered in the police environment is alcohol abuse among police officers, including alcohol addiction. It is difficult, however, to clearly indicate the scale of alcohol consumption by police officers, especially since they are adults and alcohol is a product available commercially (Kohan, O'Connor, 2002; Lindsay, Shelley, 2009; Pendergrass, Ostrove, 1986; Violanti, Marshall, Howe, 1985). Estimation of the alcohol addiction rate, against the background of the general population, poses a bigger problem, which not only poses a scientific challenge, but also a challenge for the people dealing with addiction treatment and therapy. The problem is even greater though, because the alcohol problems occurring in the general population cannot be addressed automatically, whereas existence of theoretically unconfirmed reasons for officers' excessive alcohol drinking and even alcohol addiction does not allow a clear advance of a thesis that alcohol abuse is a social or a psychological problem among police officers. What is more, scientific literature on the subject is not available, which indicates that no detailed research in this area has been carried out (Ballenger, Best, Metzler, Wasserman, Mohr, Liberman, Delucchi, Weiss, Fagan, Waldrop, Marmar, 2010). Nevertheless, John M. Violanti, James E. Slaven, Luenda E. Charles, Cecil M. Burchfield, Michael E. Andrew, Gregory G. Homish are of the opposite view, indicating that alcohol abuse among the police is not only an important legal problem, but also a social one, because police officers' alcohol drinking associated with occupational stress, as well as with the peculiar subculture existing in the police (Violanti, Slaven, Charles, Burchfield, Andrew, Homish, 2011). This has also confirmed been by research on alcohol drinking among police officers who hold significant social positions (Benton, 2009). The former Milwaukee Police Chief Edward A. Flynn, believes that alcohol abuse among police officers has been a long-standing problem, whereas alcohol accompanies officers during both stress-generating and leisure-time situations. He also specifies, alcohol consumption by police officers is socially accepted that in the state of Wisconsin, owing to the cultural conditions resulting from the specificity of the state of Wisconsin, but also due to the stressful work. Nevertheless, the very abuse of alcohol affects police officers' social behavior, which not only leads to their arrests, but also to suicides (Flynn, 2012). The Tucson Police Chief Roberto Villasenor, also indicates that police officers who served under the influence of alcohol not only were not allowed to work, but their behavior has been condemned (Villasenor, 2012). The former Austin Police Chief Art Acevedo, in turn, denotes that when police officers are convicted of alcohol-related crimes, they lose their Peace Officer license for 10 years and are relegated, which prevents them from taking action among citizens (Acevedo, 2012). Unfortunately, no such analyzes have been carried out in Poland.

What is characteristic of this subject matter, is the fact that the literature on the subject shows that one of the main factors determining alcohol use among law enforcement employees, including police officers, is the work-related stress (Coombs, 1997). American studies indicate that as many as 25% of police officers drink alcohol in the workplace to better integrate with the employee group, while about 25% cannot say no to alcohol drinking with their superiors, colleagues or workplace acquaintances (Davey, Obst, Sheehan, 2001).

The studies carried out in Chicago by James F. Ballenger, Suzanne R. Best, Thomas J. Metzler, David A. Wasserman, David C. Mohr, Akiva Liberman, Kevin Delucchi, Daniel S. Weiss, Jeffrey A. Fagan, Angela E. Waldrop and Charles R. Marmara, indicate that 18.1% of policemen and 15.9% of policewomen report negative effects of alcohol consumption, and as many as 7.8% meet the criteria of alcohol addiction, as per the rules set out by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). It is worth noting that 3.4% of policemen and 3.7% of policewomen consumed over 28 drinks in the week prior to the study. In addition, 18% of male officers and 16% of female officers mention individual adverse social and interpersonal consequences, in relation to alcohol abuse (Ballenger, Best, Metzler, Wasserman, Mohr, Liberman, Delucchi, Weiss, Fagan, Waldrop, Marmar, 2010). The study carried out by this team also shows that police officers' alcohol drinking/abuse is linked to gender. One interesting conclusion from the research is that policewomen exhibit similar drinking patterns to those of policemen, yet definitely higher than the alcohol drinking patterns of women in the general population. Research findings indicate that, in general, police officers are more likely to get drunk than people in the general population, but the likelihood of drunk policewomen is up to three times higher than that of policemen, which is not an optimistic information (Ballenger, Best, Metzler, Wasserman, Mohr, Liberman, Delucchi, Weiss, Fagan, Waldrop, Marmar, 2010). It is extremely characteristic, or perhaps rather shocking, that in the case of 'catching' a police officer drunk in the workplace, his/her colleagues and superiors protect him/her and also mitigate the possible effects of his/her drunkenness (Lumb, Breazeale, 2002).

Drug addiction among police officers is another issue. Nevertheless, as in the case of alcohol problems, it is difficult to determine the scale of illegal psychoactive substance use in the police environment in Poland. Difficulties exist in determining the scale of drug addiction in the police in other countries as well. As indicated by Angela Gorta, the analysis of the state of 'drug' use among police officers in New South Wales, Australia, carried out by an independent supervisory agency – the Police Integrity Commission (PIC), is significant, thus it was postulated not only to diagnose the scale of the phenomenon, but also to gain understanding of the nature of this problem and to develop a system allowing prevention and reduction of its harmful effects among officers in the New South Wales Police Force (Gorta, 2009). In Brazil, where, against the background of the above-average use of 'drugs' in the general population, the fact that police officers use drugs themselves is not surprising (Costa, Yonamine, Ramos, Oliveira, Rodrigues, da Cunha, 2015). According to Ray Schultz, former Albuquerque Police Chief of the State of New Mexico, increased use of a medication called Oxycontin, which is a strong painkiller opioid that has analgesic and sedative effects, has been observed among police officers. This medication, used excessively, makes people addicted, which causes problems in the sphere of professional and organizational work, but also in family life. Due to addiction and unpromising treatment success, these officers must leave work, which is very frustrating for them (Schultz, 2012). The problem of steroid use, in turn, has been highlighted by Charles Ramsey of the police in Philadelphia, who pointed out that the use of steroids has been a growing problem in the Police, because officers want to maintain physical fitness that would give them advantage over other people during street patrols, by using illegal steroids, which makes them more aggressive when interacting with citizens and causes domestic violence against their immediate family members. A personality change occurs as well, which is called 'crazy anger' (Ramsey, 2012). This fact has been confirmed by Jack Donohue, former Deputy Chief of New York Police, who claims that the use of over-the-

-counter growth hormones and anabolic steroids has been a problem among police officers. After the introduction of obligatory steroid tests and general screening tests, however, where in the event of irregularities legal liability for the use of such substances arose, the scale of the phenomenon has decreased (Donohue, 2012).

Peter Gwynne believes that there are professions where the use of 'drugs' is a common everyday practice. He writes that even the opponents of tests admit that for certain professions, which involve human safety, drug testing is justified. Unfortunately, studies have shown that only a small number of the persons tested are 'clean'. Some doctors, air traffic controllers, pilots, police officers, drivers and representatives of other professions that are important for public safety use drugs before and during their work (Gwynne, 1988). David L. Carter, in turn, states that the use of 'drugs' by police officers is treated as a social problem, especially in large cities, pointing to the experiences of Detroit, Washington, New York, Philadelphia, Miami, as well as a small city of Flint in the state of Michigan are pointed out. The author writes that "the problem [of drug addiction] clearly exists in many police organizations, at levels never envisioned before" (Carter, 1990). This has also been confirmed by Peter Gwynne, who believes that the alarming results of Boston police officers' tests for illegal psychoactive substances showed that 2% of drug-tested police officers carrying weapons had 'drugs' in their system (Gwynne, 1988).

Earlier studies, carried out by David L. Carter, showed that a fairly consistent, evolutionary drug use pattern exists among police officers. Initially, police officers used drugs at home, after finishing their service, but later on, after 'settling down' in their workplace, they also used drugs during work time (Carter, 1990). Peter Gwynne points out that for years, some officers in large cities agreed to take money from drug dealers for protection, others extorted money from these people or confiscated drugs and then sold them. Some officers went further and got addicted. Typical addiction begins when a person notoriously takes drugs in high school and college. After a noticeable period of abstinence at the police academy, where random drug tests are used, a given officer goes to work with the state police in a large city, where he/she meets colleagues who use marijuana, cocaine and other drugs outside service hours. With his/her new colleagues or alone, the young police officer returns to his/her addiction. He/she learns to trust the collusion of silence, which functions even when the superiors suspect that an officer is taking drugs. Since the officer becomes more and more addicted to drugs, he/she begins to be late for work, while his/her job performance worsens (Gwynne, 1988).

Domestic violence in police families is another phenomenon analyzed. The concept of domestic violence covers all types of ill-treatment of those family members, who are unable to defend themselves effectively (Lipowska-Teutsch, 1993). The situation of a woman entangled in violence is very difficult, due to of the specificity of this phenomenon, since the existence of several factors influencing violence, including the perpetrator's advantage, the purpose, the duration and intensity is quite significant. Violence is always intentional, contributes to the violation of the rights and the property of another person, prevents self-defense, causes physical and mental damage. Violence is a process that tends to recur, gaining strength over time, giving satisfaction to the person using it. The person responsible for violence is always the perpetrator, who can use physical, psychological, economic and sexual violence. The perpetrator manipulates the victim, cuts him/her off from the current environment, makes him/her emotionally dependent and manipulates him/her (Chojnacka, 2013). Many cases of domestic violence, however, are not exposed, because of a belief that: a) the 'dark side' of one's live should not be revealed; b) no one should interfere with the

lives of others; c) there is no violence when it is not physical; d) the woman is blameworthy of the violence; e) nothing in life can be changed; f) violence is a social-margin problem (Chojnacka, 2013). Exposure of domestic violence in the police environment to the public is a shock, both for the citizens and for the police themselves. This results from the fact that while police officers, when dealing with this phenomenon, themselves may not be aware of or notice the existence of this problem in their own ranks, dissonance in the perception of the issue emerges when the police officers who are obliged to respond to a situation of domestic violence become aware of the fact that they commit these types of crimes themselves (Naja-Pasek, 2013). Studies conducted in the US have shown that domestic violence has been documented in 40% of police families, which means that there are four times more cases, compared to the 10% in the general population of American families (Neidig, Russell, Seng, 1992). The research presented to the US Congress showed that the violence used against immediate family members is not only physical or mental, but involves the use of service firearms (Johnson, Todd, Subramanian, 2005). One spectacular example is the case of the Chief of Police in Tacoma, Washington, who on April 26, 2003 shot his wife and then himself in the parking lot of a local mall. Their two small children witnessed this tragedy. During the investigation, it turned out that the perpetrator had been using violence against his family members for a long time, and soon before the tragedy, he repeatedly threatened his wife. The public was outraged by this act and demanded a public investigation, all the more so, because, as indicated at the time, the Chief of Police carried this act out demonstratively and publicly, using his service weapon (Stinson, Liederbach, 2013). Another example is the case of the wife of a high-level officer working in the Philadelphia police. For almost two decades of marriage, she was beaten, kicked and strangled by her husband, where the husband was sure that her reporting of domestic violence to the Police would do nothing. The Police ignored the reports, while her husband was continuously promoted. He was never accused of violence and worked in the Police until retirement. As it turns out, however, this woman's story was not an isolated incident (Cheema, 2016).

The risk of domestic violence in police families is related to the following factors: a) the police work schedule; b) partner's way of being dominant at home; c) partner's withholding of emotions, a behavior learned at work; d) inability to separate professional and family life, while copying the behavior towards criminals and transferring it to the home environment; e) the lack of colleagues' and/or superiors' social support for victims (Pietruszka-Pandey, 2013). Characteristically, the American experience shows that a certain 'collusion of silence' exists regarding the domestic violence used by police officers. Leanor B. Johnson, Michael Todd and Ganga Subramanian have recognized the fact that such violence is subject to a secrecy clause (collusion of silence), because police officers are connected by bonds of camaraderie and professional solidarity, and are not inclined to leak out any information, even about irregularities (Johnson, Todd, Subramanian, 2005). When violence occurs in the police environment, the victims are afraid to report it to the prosecutor's office or the Police, because they are convinced that the perpetrators will use their contacts in the prosecutor's office or in the Police to avoid liability, which has been confirmed by studies indicating that perpetrators may have access to procedural information, manipulate the facts and intimidate the victims. What is more, being familiar with the law and the criminal procedures, they and can drag the cases until they expire (Pietruszka-Pandey, 2013). Even if violence is documented, women do not report the violence used by their partners who are police officers, because: a) they are ashamed that

the person who deals with crime prevention uses violence himself; b) they are afraid that the truth will be revealed and it will 'break' her partner's career, which will entail a loss of life at a proper level; c) they fear being perceived as weak and helpless; d) they fear that their domestic relations will transfer to their professional relations; e) if they hold supervisory positions, they are afraid of losing their 'boss' authority; f) they are afraid to harm the children, who consequently will lose their 'father'; g) they fear that, as a result of professional solidarity, the partner's colleagues will support him (Chojnacka, 2013).

In Poland, no research has been conducted on the scale of the domestic violence phenomenon, while the statistical data is estimated based on information from other countries, although in American literature, the domestic violence used by police officers is referred to as the "Fox in the Henhouse" as well as the "Black and Blue Bloods" (Cheema, 2016).

3. CONCLUSION

Summing up these considerations, it should be noted that the cases of suicide, alcohol problems and drug addiction, or domestic violence, occurring in the police environment, have been treated as exemplary dysfunctional and socio-pathological phenomena of an individual nature, while the analysis of the literature on the subject, in this regard, does not allow any illusions that the situation in the Polish Police Force is different. As such, it is not reasonable to question whether these phenomena exist in the police environment, but rather what the scale of such phenomena is. The extensiveness of the analytical area that the persons scientifically exploring this subject must face is not without significance either.

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LEGAL ACT

The Police Act of 6 April 1990 (Journal of Laws 2020 item 360, as amended).

Arkadiusz PIETLUCH[1]

FOSTERING STUDENTS' ADAPTABILITY THROUGH SELF-EFFICACY: A CASE STUDY OF UNDERGRADUATE UNIVERSITY STUDENTS

The present study was initiated to verify whether a curriculum enhanced with efficacy-building techniques might foster students' adaptation to an online study environment during the COVID-19 pandemic. Inductive thematic analysis was applied to analyze interview data obtained from 32 sophomores pursuing a degree in English as a Foreign Language. Three main themes were identified: students voiced their concerns regarding the lack of online literacy, symptoms of cognitive overload, and the absence of meaningful relationships. The planned intervention partially facilitated the students' transition process: growing efficacy among the sample was linked to more proper attribution, less negative affect, and the development of individual and shared regulation mechanisms.

Keywords: self-efficacy, adaptability, regulation mechanisms, affect.

1. INTRODUCTION

The outbreak of the global pandemic has triggered unprecedented changes in the daily lives of individuals around the globe, including members of academia. Although remote education offers many benefits, teachers and students alike struggled not only with limited social contact and the fear of the unknown but also with adjusting their efforts to a novel delivery mode. Although, at that point, students had some prior experience with online education, it soon became apparent that many obstacles they faced were not appropriately addressed. Aware of the challenges evoked by the novel study environment, the present intervention study was initiated at the onset of the winter semester of 2020/21 to facilitate students' adaptation to a remote learning environment.

2. THEORETICAL FRAMEWORK

2.1. Adaptability

Adaptability is defined as an individual's capacity to adjust behaviours, thoughts, and feelings in response to variable, uncertain, and unexpected circumstances (Martin, Nejad,

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Colmar, Liem, 2013). Adaptability is most typically conceptualised as a composite of three dimensions: (i) *behavioural*, referring to adjustment of one's actions; (ii) *cognitive*, which concerns adapting one's thoughts to given circumstances; (iii) and *emotional*, explained as adopting a suitable frame of mind and altering one's affective responses (Holliman, Waldeck, Jay, Murphy, Atkinson, Collie, Martin, 2021). In educational contexts, the concept is defined as students' prowess in monitoring and directing their cognitive, behavioural, and emotional responses to facilitate future performance and meet academic objectives. Thus, adaptability is frequently conceptualised as a crucial facet of self--regulated learning (Winnie, Hadwin, 2008). The concept has also been linked to higher overall levels of motivation (Martin et al., 2013), engagement (Zhang, Wu, Xu, Cao, Goetz, Parks-Stamm, 2021), and emotional well-being (Holliman et al., 2021).

Whereas students' adaptability while transitioning to new educational settings seems to be relatively well-investigated (Collie, Holliman, Martin, 2017; Martin et al., 2013), the research on how students cope with exchanging face-to-face learning for a remote study environment due to the outbreak of COVID-19 is currently scarce. However, it is possible to observe some investigative efforts in this regard. In the pandemic context, satisfactory adaptability was associated with lower levels of negative affect (Zhang et al., 2021) and higher study satisfaction and emotional well-being (Ishimaru, Adachi, Nagahara, Shirai, Takemura, Mehrasa, Higashino, Yagi, Ikeda, 2021). Additionally, the study by Besser, Flett, and Zeigler-Hill (2020) indicated that individual difference factors such as self--esteem, self-criticism, and sense of mattering might help predict students' adaptability, as students with higher self-reported adaptability were more inclined to display healthy self-perceptions.

2.2. Self-efficacy

In its essence, self-efficacy refers to whether or not individuals judge their own skills and abilities as sufficient to produce satisfactory outcomes, especially in circumstances which they consider challenging and requiring much effort. Usher and Pajares (2008) identified four primary sources of efficacy beliefs and proposed the following taxonomy: (i) *mastery experiences*, which pertains to the analysis of one's past performances; (ii) *vicarious learning*, with efficacy information being accrued through the observation of other people pursuing goals an observer finds personally relevant; (iii) *verbal persuasion*, referring to the reinforcing role of feedback provided by one's significant others; and (iv) *emotional cues*, explained as both positive and negative affect experienced during one's pursuits. As self-efficacy leverages such aspects of an individual's performance as decision--making, appropriate goal-selection, effort expenditure, success-failure attribution, and perseverance in challenging circumstances, it is considered one of the most important non-intellective predictors of achievement, also in the academic setting (Talsma, Robertson, Thomas, Norris, 2021).

As the outbreak of the worldwide pandemic has caused unprecedented disruption in virtually all domains of human existence, it comes as no real surprise that the construct of self-efficacy has been at the centre of researchers' attention. In educational contexts, the recent study by Aguilera-Hermida (2020) suggested that less agentic students reported lower expectations regarding their academic performance due to the pandemic outbreak. Also, self-efficacy was linked to less negative affect throughout periods of prolonged confinement (Alemany-Arrebola, Rojas-Ruiz, Granda-Vera, Mingorance-Estrada, 2020).

3. RESEARCH RATIONALE

Considering both self-efficacy and adaptability represent personal resources which support individuals in cognitive, behavioural, and emotional adjustments in response to novel, challenging circumstances, it seems warranted to assume that these factors may also aid members of academia in tackling the adverse consequences of the global pandemic. Surprisingly, the constructs have been rarely investigated in combination, although it is possible to observe some investigative efforts linking adaptability and domain-specific efficacy beliefs (Martin, Collie, Nagy, 2021; Zhang et al., 2021). As no study to date has attempted to induce more favourable efficacy beliefs in efforts to foster students' adaptation to a remote mode of teaching, the present project was initiated to verify whether an efficacy-imbued curriculum may contribute toward a less-cumbersome transition to a novel study environment.

4. METHODS

4.1. Participants

In the present project, convenience sampling was used, and the research sample was composed of students who participated in the translation classes held by the author. More specifically, the participants were 32 sophomores (Female: 18, 56,25%; Male: 14, 43,75%) pursuing a degree in English at one of the public universities in Poland. The group was homogenous in terms of age and language proficiency.

4.2. Interviews

The data were collected through a semi-structured interview protocol designed specifically for the research. Two online interviews (pre/post-intervention) were conducted with each respondent, and a typical interview would last 40 minutes on average. In Phase 1, the respondents were familiarised with the methodology of the study and were requested to sign a written consent form. Then, the respondents were requested to comment on their remote learning experience, including aspects such as observed advantages and disadvantages of online education and self-evaluation of one's coping efforts. In Phase 2, the participants were to reflect on their prior accounts (short summaries were provided) and the effectiveness of the course. A typical interview would also incorporate several probing and follow-up questions.

4.3. The intervention

Considering self-efficacy is a personal resource that aids individuals in adjusting their coping efforts to challenging circumstances, it was hypothesised that higher agency might support learners in regulating their cognitive, behavioural, and emotional responses while functioning in the new reality. The intervention consisted of several stages; in Phase 1, a pre-intervention interview was conducted to identify and reframe the obstacles students perceived as deteriorating their learning experience. Consequently, as many students struggled with the lack of online literacy, a training session in MS Teams was held. Additionally, each student was provided with a personalised strategy that targeted respondents' perceived deficiencies in workload management. As self-efficacy begins with autonomy, the strategies were not imposed on learners and were meant to serve guiding purposes.

At the beginning of Phase 2, a discussion was held with the participants with the aim of identifying an end goal the students would find both relevant and educational. It was agreed that instead of individual translation projects, the whole group would prepare three assignments and present them in front of their fellow freshmen. To allow for continuous efficacy-building, several progress checks were incorporated. The tasks conducive to the end goal were not pre-defined; the author hoped that the feeling of collective responsibility for the outcomes would positively influence learners' agency and participation. Upon completion of each minor assignment, a discussion would be held so that learners could exchange ideas and reach a consensus on whether the outcomes were satisfactory. Students had 90 minutes to complete each of the minor assignments, and, in case it was not completed on time, participants would hold an additional meeting on Teams to finish the task at hand. On top of achieving course-related objectives, such meetings were believed to grant students additional opportunities to socialise. Three immediate feedback strategies were chosen for the present research: (i) peer assessment, (ii) the teacher's feedback, and (iii) self-assessment.

4.4. Procedure and validity measures

Given the formerly mentioned scarcity of studies linking adaptability with general self--efficacy beliefs and the corresponding need for more elaborate interpretations, inductive thematic analysis as outlined by Braun and Clarke (2007) was used. In this approach, instead of approaching the data with some preconceived themes, the themes are determined by the dataset (Nowell, Norris, White, Moules, 2017). In the first stage of the analysis, the interview data were transcribed and read repeatedly to develop a more satisfactory understanding of individual accounts. In the next step, a description of each account was produced. The crucial sections of the text were then highlighted using different colours, with each colour corresponding to a different label. The following extract illustrates the procedure:

Table 1. Codes-sample

INTERVIEW EXTRACT:	CODES:
Many of my friends stay with their families, but I am stuck in the dormitory room. I could go back home, but I don't want to put my parents at risk. I have to do everything on my own, and I have never felt so alone. I was excited about meeting new people, partying, and studying together. I haven't had a chance to experience any of this.	• Exclusion and loneliness • Security of family members • Need for peer relationships • Sense of loss

Source: Research data gathered by the author.

The codes were then reviewed to verify whether any prevalent patterns may be identified in the dataset. The labels which were overlapping or were deemed too vague were discarded. The table below illustrates how the codes were merged into themes.

The final themes were then once again reviewed to ensure that they represented what was dominant in the data (Nowell et al., 2017). Several measures were adopted to ensure the validity of the present investigation. The respondents were provided with written summaries of their accounts to verify whether the description elaborated by the researcher was concise and factual. As an additional validity measure, an external audit was performed,

and an external researcher was requested to verify the veracity of the procedure and the corresponding interpretations. The results of the coding procedures were primarily coincidental (with an inter-rater agreement of 90%). The minor disagreements that emerged in due course were first discussed and then, the author implemented some name alternations proposed by the auditor.

Table 2. Merging codes into themes

THEMES:	CODES:
• Lack of meaningful relationships	• Need for peer relationships • Exclusion and loneliness • Sense of loss

Source: Research data gathered by the author.

5. FINDINGS

5.1. Lack of online literacy

Several participants complained about teachers' lack of online literacy, which comes as no real surprise considering the abrupt nature of the transition to the online study environment. Interestingly though, while reoccurring technical issues would indeed pose a threat to an effective educational process, it transpires that teachers' lack of literacy also had a bearing on students' efficacy in this domain, as some respondents reported feeling uncertain as to whether they have the required skills to fully participate in online classes:

> Initially, I felt sorry for our teacher as I could tell she was having problems. I am having a hard time adjusting, too. I've never been into new technologies and computers. Actually, I wonder if my skills are enough to participate in the classes. For a moment, I even thought it was her fault and that she didn't care. I am thinking about taking a break from my studies.

Following the intervention, the same participant commented:

> I was just searching for an excuse not to continue my studies. All it took was to watch a few tutorials on YouTube, it made my life so much easier. I even recommended them to our lecturer! I think at that time, I just had enough of sudden changes, and I had to find something or someone to blame.

5.2. Cognitive overload

In the initial months of the pandemic, students experienced severe difficulties adjusting their coping efforts to the novel reality. Whereas the vast majority of students struggled with workload management and maintaining study-life balance, leading to emotional weariness, there were some seemingly successful individuals who claimed that they were not satisfied with their coping efforts, giving rise to negative affect:

> People from my group often ask how I cope with all the assignments we get. They only see my good grades, though. I don't think I do enough. Before COVID, we all had equal chances, but now? I have to work twice as hard to receive identical

education. Otherwise, I don't think I stand a chance of competing for a job with someone who studied before the pandemic. I can't stop thinking about it.

Considering both self-efficacy and adaptability are personal resources that aid people in navigating through periods of the unknown, the hope was that the growth in the individual resources might mediate the detrimental impact of the pandemic. As one of the students commented:

My study-life balance is much better now. I mean, I didn't know what to expect at first, and that scared me. With all the COVID news I listened to daily, it was difficult to organise myself, I considered it pointless. I have learnt my lesson now and stopped complaining about everything. I even started working out in my free time!

We also asked the respondent who mentioned unequal job opportunities to comment on his thoughts:

I think I was overwhelmed with all the adjustments and sacrifices we had to make back then. I don't think so now. It will take time for the job market to get back to normal and for work to get back to normal. But I am great at what I do, and I love teaching people. I will surely find a job where it will be appreciated.

5.3. Lack of meaningful relationships

Although the detrimental impact of the pandemic could be observed in all domains of life, it is not at all surprising that most people, including students, found isolation and social distancing emotionally straining. Not only have the students suffered from the lack of meaningful relationships with peers, but they also experienced severe difficulties seeking support. As one of the participants commented:

Many of my friends stay with their families, but I am stuck in the dormitory room. I could go back home, but I don't want to put my parents at risk. I have to do everything on my own, and I have never felt so alone. I was excited about meeting new people, partying, and studying together. I haven't had a chance to experience any of this.

Conversely, some respondents mentioned being overwhelmed by the amount of time spent with their families:

I know it sounds horrible, but being separated from other students isn't the worst part. It is staying with my family 24/7. I find it difficult to focus with all my family members being around. I have no one to talk to and share my problems with. They have no idea what I am going through.

Although the intervention was successful in creating a sense of shared responsibility amongst the sample and provided students with an abundance of opportunities for interaction during regular meetings on the Microsoft Teams platform, it transpires that the implementation of the curriculum has not been successful in remedying the sense of solitude experienced by all participants:

It was fun at first, but all in all, we just spent more time talking about class assignments. I would rather spend some time socialising than talk about another project. I was stuck with my family all the time, so it was quite difficult not to be mad about it.

6. DISCUSSION

As far as the lack of online literacy is concerned, two main trends were identified, with the majority of students voicing their concerns as to teachers' skills in manoeuvring through the online environment. Significantly, this lack of technical prowess gradually extended to students, leading to a distorted perception of their own skills. Although it was not anticipated, some students interpreted teachers' online illiteracy as a lack of appreciation. Korthagen, Attema-Noordewier, and Zwart (2014) identified positive contact with a teacher as a factor that may lead to increased engagement and more favourable educational outcomes. Although much more research work is definitely required to fully comprehend what factors influence positive teacher-student rapport in online environments, the analysis suggests it may be somewhat difficult to form such a liaison in the context in question. Similar conclusions were reached in the recent study by Tannert and Grőschner (2021). Another issue to be considered is that while carefully planned online curricula possess many advantages, the transition to remote learning in Poland was characterised primarily by the adoption of the same educational measures as those used in traditional classes (Biedroń, Mitręga, Wawrzak-Chodaczek, 2021). Having said that, online programmes should take into account the specific requirements typical for a virtual environment. Even more importantly, though, a successful curriculum should provide space for teacher-student dialogue, which creates a sense of meaningfulness and provides learners with opportunities to build their agency in the virtual domain.

Moving on to cognitive overload, the analysis of the dataset indicated that the respondents' weariness was provoked not only by the uncertainty caused by the pandemic but also by the formerly mentioned lack of curricula adjustment. Some participants experienced issues adjusting to the novel study mode, which required significantly more individual work, leading to poorer life-study balance and, consequently, negative self-perceptions. This coincides with the findings of Martin et al. (2013), who indicated that students low in adaptability might anticipate poorer performance and be more inclined towards self-sabotaging and disengagement. The growth of learners' agency triggered by the revised curriculum contributed to adequate attribution of their accomplishments; the respondents were more likely to assess their prior efforts as inadequate and, instead of dwelling on the unfortunate circumstances, the growing efficacy acted as a catalyst for higher effort expenditure. Although prior to the intervention, the vast majority of respondents were more likely to seek external attribution for their poor performance, there were some students who expected similar outcomes as in the traditional delivery mode and experienced negative affect due to what may be perceived as overt perfectionism. While the need to exert more effort may be beneficial and some may find it immensely motivating, such over-adaptation may also lead to a biased assessment of one's coping efforts, increased emotional weariness, and, finally, lower academic outcomes. On top of building students' knowledge, a successful online curriculum should also teach students how to tailor their expectations and interpret their coping efforts.

The incorporation of efficacy-building techniques may aid an educator in accomplishing that very objective.

Although the pandemic has wreaked havoc on our functioning and many activities had to be harshly limited, it comes as no real surprise that what most people found highly distressing was social distancing. This is also applicable to the members of academia, as socialising is an essential part of a student's life. In fact, Bateman (2002) found that the sense of community among students impacts not only psychological well-being but also motivation and attitudes towards the educational setting. The data analysis indicated that the inability to interact with peers might lead to lower satisfaction with family relationships, including a perceived lack of relatability and difficulties in arranging sufficient conditions for learning. In the present project, the sense of shared responsibility for the end goal of the course partially counteracted the negative affect triggered by isolation. Being aware that one's engagement may impact the outcomes of others encouraged the majority of students to exert more significant effort and overcome periods of amotivation. This observation coincides with the findings of Besser, Flett, Nepon, and Ziegler-Hill (2022), who indicated that having a sense of mattering constitutes a source of reassurance for individuals coping with less social contact. Additionally, the collaborative nature of the project, which assumed negotiation of course components, granted students an abundance of opportunities to tackle social challenges and develop both individual and shared regulation mechanisms.

7. CONCLUDING REMARKS AND LIMITATIONS

The outcomes of the present research indicate that self-efficacy may be particularly helpful in mediating issues stemming from poor adaptability in remote academic environments. More specifically, it was found that a growing sense of efficacy contributes to experiencing less negative affect, showing adequate success-failure attribution, and developing successful regulation mechanisms on both individual and group levels. Although the respondents voiced many concerns related to the sudden shift to the novel mode of studying, including lack of online literacy, cognitive overload, and the absence of meaningful relationships, the most imperative conclusion to be drawn here is that successful online programmes should take into account the requirements of a virtual environment, provide space for dialogue and communication, and encourage students to be co-creators of their educational success rather than passive receivers of knowledge.

The present intervention study was not without its limitations. Firstly, convenience sampling was used, and the research participants were recruited from the author's students, which might have had an impact on the respondents' motivation. Additionally, the present project was a small-scale study; bearing in mind the novel nature of the research, it was argued that a small sample would allow for higher controllability. Nevertheless, it would be recommendable to verify whether the findings could be extrapolated to a more significant population.

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Michał RADKE[1]

ARE ANALYSTS REALLY OVERLY OPTIMISTIC WHEN PREPARING RECOMMENDATIONS?[2]

The main aim of this research was to estimate the level and distribution of optimism among analysts preparing stock market recommendations. A secondary goal was to analyze the relationship between optimism and socio-demographic variables such as age, education, and professional experience. The author used the Received Life Orientation Test (LOT-R) to test optimism. At the same time, the paper attempted to compare the results of optimism research using the psychological tests carried out by the author with previous research that perceived optimism as the difference between forecast and reality. According to the survey, individual investors in Poland are characterized by an average level of optimism of 14.38 points according to the LOT-R test, where the average level of optimism ranges from 14 to 18 points. The research did not find that the level of optimism was influenced by such socio--demographic characteristics as age, experience, or education.

Keywords: optimism, LOT-R, stock market analysts.

1. INTRODUCTION

Psychology emerged in finance at a time when scientists could not explain all financial phenomena using the theory of classical economics. It turned out that the decision-making process, apart from financial factors, is also influenced by individual feelings and beliefs. One of the most important areas in this regard is the sphere of emotions and on that background the excessive optimism which people demonstrate (Pastusiak, 2016). One of phenomena most exactly described in the decision-making literature is that individuals are overly optimistic about future outcomes (Weinstein, 1983).

Optimism can most simply be defined as the difference between expectations and reality. If expectations are higher than reality, we speak of optimistic cognitive bias, if reality is better than expectations, then we speak of pessimism. The intensity of optimism can therefore be measured empirically by comparing expectations with reality (Sharot, 2011). Optimism is a feature that one may possess to a varying degree. Perhaps the nature

has endowed us with a basic level of optimism, and people may, for various reasons, reveal a higher or lower intensity of this feature in their lives. Another issue may be differences between people in terms of specific, partial manifestations of optimism in some issues and its lack in others (Czerw, 2009).

In the literature of the subject, excessive optimism consists in an unrealistic belief of an observer about positive course of events concerning him/her (Zielonka, 2017), or unrealistic optimism can be defined as an expectation of results that are better than reasonably probable (Shepperd, Pogge, Howell, 2017). People show a remarkable tendency to be overly optimistic, often predicting future quite unrealistically positively (Shepperd, Waters, Weinstein, Klein, 2016). In case of unrealistic optimism, the forecast is unrealistically positive compared to the objective probability of an event (Jefferson, Bortolotti, Kuzmanovic, 2017). Martin Seligman, former president of the American Psychological Association and a legendary researcher in the field of optimism, has discovered that optimism or pessimism lies in the way you explain events that happen to you. Such "automatic thoughts" often incline us to judge events inaccurately and leap to wrong conclusions (Collingwood, 2018).

Scientists have been studying unrealistic optimism for over 30 years. The Web of Knowledge database contains five most commonly used related terms, such as: unrealistic optimism, comparative optimism, optimistic attitude, biased optimism, and the illusion of insensitivity. Additionally, we can associate terms such as "planning error" and "positive delusions" with optimism (Shepperd, Waters, Weinstein, Klein, 2013). So unrealistic optimism is a general bias of most people. Everyone estimates these probabilities according to certain rules resulting from characteristics of events. However, those who have a significant influence on others' decision-making are statistically optimistic and overconfident, and are more likely to take risks than they realize. As a rule, risk takers underestimate the risk of failure and put too little effort into determining the actual state of affairs (Kahneman, 2012).

Optimism can also be understood as a source of many economic phenomena. It is important for financial intermediation (Coval, Thakor, 2005, may influence financial decisions and accounting of enterprises (Heaton, 2002), may raise security prices in the face of short selling restrictions (Chen, Hong, Stein, 2002), be an important element of utility (Brunnermeier Parker, 2005) and lead to excessive or insufficient return on investment (Barberis, Shleifer, Vishny, 1998). However, in financial economics, there is relatively little direct evidence about the role that optimism plays in individual economic decision-making (Puri, Robinson, 2007).

Optimism is examined on many levels. Most often, in the literature on economics or finance, optimism is perceived as unrealistic prediction of the future, i.e. a difference between forecast and reality. However, there is little research on dispositional optimism among capital market participants, understood as a character trait surveyed by psychological tests. Similar conclusions were reached by Puri and Robinson (2007), who stated that the main obstacle in collecting large-scale economic evidence on optimism is measurements: direct psychometric tests of optimism are not carried out in large-scale economic research. The author noticed a research gap concerning research with psychological tests on optimism among capital market participants, including stock market analysts.

2. EARLIER RESEARCH ON OPTIMISM AMONG ANALYSTS
   WHO ISSUE STOCK MARKET RECOMMENDATIONS

The interest in optimism goes beyond psychology. This concept is ubiquitous in many communities of science (including law, economics, and decision science) and medicine. For example, economists study the occurrence of unrealistic optimism among managers (Malmendier, Tate, 2008; Lin, Hu, Chen, 2005; Hilary, Hsu, Segal, Wang, 2016), individual investors (De Bond, 1993; Iqbal. 2015; Riaz, Iqbal, 2015; Gakhar, 2019) and among stock market analysts.

Tyszka and Macko (2005) conducted a study on three professional groups, such as lawyers, entrepreneurs and financial analysts, in order to check the level of their optimism. Their research shows that financial analysts were characterized by the highest level of optimism.

Cowen, Groysberg, and Healy (2006) found that analysts from companies that financed research through underwriting and trading actually produced less optimistic forecasts and recommendations than broker analysts who did not use underwriting. Optimism was especially low among analysts from large investment firms, suggesting that the firm's reputation diminishes the analyst's optimism. Analysts serving retail investors are more optimistic than those serving only institutional investors. Agrawal and Chen (2008) examined whether conflicts of interest with investment banking and brokerage firms prompted sell-side analysts to issue optimistic stock recommendations, and if so, whether investors were misled by such prejudices. Using quantitative measures of potential conflicts constructed on the basis of a new data set containing a breakdown of the income of employers employing analysts, the authors found that sentiment levels in the recommendation are indeed positively related to a size of conflict.

Kicia (2008) measured the dependence of the market situation and changes in analysts' sentiment (optimism). In the period from 2000 to 2003, he compared the value of the WOA index (analysts' optimism index) and the WIG20 index. As a result of the research, the author stated that on the Polish market there is no significant relationship between the sentiment (optimism) of analysts and the stock market situation.

Mola and Guidolin (2009) conducted a study on analyst optimism related to investment funds. It shows that analysts issuing recommendations for companies included in investment funds' portfolios show excessive optimism in their recommendations compared to recommendations issued for companies that do not belong to any investment portfolios.

Ertimur, Muslu and Zhang (2010) noted in their research that recommendations issued for the first time are less optimistic than the "corrective" recommendations issued again for a given company.

Drake and Myers (2011) examined whether an analyst's experience and size of a brokerage house moderate the relationship between overly optimistic forecasts and high growth. The authors found that over-optimism is lower for analysts with more experience and analysts tracking fewer companies, but we find only limited evidence of a lower level of over-optimism for analysts from larger brokerages and analysts tracking fewer industries.

Dąbrowski (2013) examined the accuracy of recommendations in the period from 2007 to 2012 for 5 Blue Chip companies, i.e. TPS, PKN Orlen, PKO BP, Pekao S.A., KGHM. In the analysed period, very optimistic forecasts of analysts were observed. 70% of

recommendations related to purchase of instruments, while 30% related to their sale. The survey shows that only 44.63% of recommendations reached the target price within the planned time horizon. The above research shows that the accuracy is low, which suggests the optimism of analysts.

Bosquet, de Goeij, and Smedts (2014) examined analysts' recommendations in the period 1996–2006. They proved that female analysts' chances of giving optimistic advice are 40% lower than that of male analysts. In case of employment in leading financial institutions, the proportions are decreasing and chances of issuing optimistic recommendations are 16% lower for female analysts than for male analysts. They also found that the observed gender heterogeneity could not be attributed to differences in the risk characteristics of the recommended instruments, experience, or task complexity.

Keller and Pastusiak (2015) conducted a study on 786 stock exchange recommendations of WIG20 companies in years 2009–2012. These studies show that the hypothesis about occurrence of behavioural effects in a form of excessive optimism and the anchoring effect in the process of making recommendations has been confirmed.

Pastusiak (2016) conducted a study of stock exchange recommendations for a group of 10 companies listed on the Warsaw Stock Exchange (WSE). The aim was to present whether there is an excessive optimism among analysts when issuing stock market recommendations. These studies covered the period from 2000 to 2013. The maturity date of the recommendation was 250 session days from the date of issue. The study of stock market recommendations shows that the valuations are overstated by a value oscillating around 30%. These studies confirmed the previously adopted hypothesis about overestimation of value by analysts, which may be a symptom of an excessive analyst optimism. In another study, Pastusiak (2017) analysed 1,558 recommendations from years 2000–2014. As a result, he found that the most numerous groups of cumulative errors in case of positive recommendations is the one in the range from -29 to -4%, while in case of negative recommendations, the most numerous group is in the range of errors from 3 to 33%. This allows to conclude that the direction of the mistakes made is not identical in case of positive and negative recommendations. The results suggest that the phenomenon of over-optimism may rather be observed in case of positive recommendations. Summing up, it should be noted that the phenomenon of excessive optimism in the context of the adopted method of research is not unequivocal, but it can be stated that this heuristic is present and very visible in case of positive forecasts.

Kowalski and Prażników (2017) analysed the optimism of brokerage recommendations on the Polish capital market. They examined 170 brokerage recommendations for years 2014 and 2015. Their research shows that analysts more often forecast a higher valuation than suggested by a historical driving force and a model of constant growth. They observed the most optimistic perception among companies with low historical financial results. The greatest optimism was observed in case of companies with a buy recommendation and companies in a downward trend in valuation.

Pastusiak (2018a) in his next article points to a significant problem of a notorious overestimation of forecasting values in stock market recommendations, which may cause potential incorrect investment decisions among recipients of these recommendations. The research also shows excessive optimism among analysts, as the discount for analysts' optimism in recommendations was -19.35% for positive (buy), and for negative (sell) 5.32%. As a result, buy recommendations were overestimated and sell recommendations

were underestimated, which suggests excessive optimism among analysts. In another study, Pastusiak (2018b) analysed over 10,500 stock market recommendations in years 2000––2014, as a result of the research carried out, in case of buy recommendations, an average overestimation by analysts was 29%, while in case of sell recommendation, an underestimation by analysts was 12%, which proves the occurrence of optimism in issued recommendations. The researcher also determined how often we deal with optimistic recommendations in case of positive and negative recommendations, in line with the understanding of optimism as price overestimation in case of positive recommendations and underestimation in case of negative recommendations. In case of positive recommendations, an optimistic reaction appeared in over 5,000 cases out of 8,500 observations, while in case of negative recommendations, it is about 700 observations in a sample of 2,000 records. One may notice that the phenomenon of excessive optimism is not identical in case of positive forecasts, it occurs twice as often as in case of negative forecasts, i.e. it intensifies when the analyst describes a given company as having growth potential.

In separate studies, Pastusiak and Keller (2019) conducted a study on excessive optimism in valuations among stock market analysts. The research sample included 10,000 brokerage recommendations from 40 brokerage houses published on the WSE in years 2000–2014. Their research shows that 70% of the recommendations showed excessive optimism.

Brycz, Dudycz and Włodarczyk (2021) analysed the relationship between quality of forecasts and type of analysts' stock market recommendations. Their analyses were based on stock exchange recommendations for companies listed on the WSE in years 2005–2012. The authors did not see a clear difference in the level of analysts' optimism (pessimism) in their forecasts between different types of stock market recommendations, but found that analysts' optimism was visible in the amount of overestimation of their forecasts.

The analysis of the studies presented earlier shows that they focused on the difference between forecast and reality, and thus a conclusion was reached about the optimism of stock market analysts, however there are no psychological studies that would confirm optimism among analysts.

In addition to examining the level of optimism among an individuals in psychology, economics and finance, the influence of socio-demographic variables on the level of optimism was investigated.

Stach (2006) showed that the level of optimism is influenced by such variables as gender and education, while the level of optimism is not influenced by age. Czerw (2009) recognized in her research that age influences the level of optimism, while optimism does not depend on gender. Glaesmer, Rief, Martin, Mewes, Brahler, Zenger, Hinz (2012) showed the influence of age on the level of optimism: younger people showed a higher level of optimism than older people, they did not notice any gender differences. Hinz, Sander Glaesmer. Brähler. Zenger, Hilbert, Kocalevent (2017) found that gender influences the level of optimism, men are more optimistic than women. However, age differences in the level of optimism were small. Schou-Berdal Heir, Skogstad, Bonsaksen, Lerdal, Grimholt, Ekeberg (2017) found that there was a significant statistical effect for age. They found no differences in the level of gender optimism. However, they confirmed the influence of education on the level of optimism, people with higher education were more optimistic. They also showed that people living in the city were more optimistic than those living in villages and towns. Prosad, Kapoor, and Sengupta (2015) examined whether demographic

characteristics, including age, gender, income, occupation, and experience are related to overconfidence, optimism, disposition, and herd bias. They found that age, occupation, and experience had a stronger relationship with behavioural bias than the other factors they examined. Ates, Coskun, Sahin and Demircan (2016) found that the level of over-optimism, over-confidence and loss aversion among unmarried investors is much higher than among married investors.

3. HYPOTHESES AND METHODOLOGY

3.1. Goals and hypotheses

The main aim of the paper is to investigate the occurrence of excessive (high) optimism among stock analysts who prepare stock market recommendations. In connection with the main goal of the analyses carried out, also partial goals will be fulfilled consisting in characterization of socio-demographic factors, i.e. an answer to the question whether experience, professional licence, age of analysts preparing recommendations have an influence on the occurrence of an excessive level of optimism,. For this purpose, 3 research questions were asked:

1. Does experience differentiate the level of optimism among analysts?
2. Do professional licence differentiate the level of optimism among analysts?
3. Does age differentiate the level of sentiment among analysts?

In connection with the formulated research goals and questions, related hypotheses were formulated. Referring successively to the secondary goal and sub-goals of the research, they were defined as follows:

H1: Stock market analysts who prepare recommendations are overly optimistic.
H2: Experience of stock market analysts differentiates the level of optimism.
H3: Professional licence held by a stock market analyst differentiates the level of optimism.
H4: Age of an analyst differentiates the level of optimism.

3.2. Participants and procedure

The research objective regarding occurrence of excessive optimism among stock market analysts preparing analytical reports using the psychological Life Orientation Test (LOT-R) transformed into a criterion of selecting the research sample, as the research concerned a small group of specialists. The purposeful selection technique was chosen, which consists in indicating population units that should be included in the sample by the researcher. People included in the sample had to meet the following criteria: work in a financial market institution issuing recommendations, participate in the process of preparing recommendations.

The survey was carried out using the CAWI (Computer Assisted Web Interview) method consisting in conducting a computer-supervised Internet survey. The survey was conducted from September 2019 to March 2020. The research sample consisted of 37 analysts. Table 1. presents characteristics of the surveyed group according to the analysed sociodemographic variables in terms of their percentage share in the studied sociodemographic variable and their number.

Table 1. Frequency distribution for a general research sample with split into sociode-mographic variables

Variable	Factor	Overall
Age	25–34 years	27.00% (N = 10)
	35–44 years	46.00% (N = 17)
	44 and more years	27% (N = 10)
Licence	lack	13.50% (N = 5)
	1 licence	37.80% (N = 14)
	2 and more licences	48.70% (N = 18)
Experience	5–10 years	51.40% (N = 19)
	11–15 years	29.70% (N = 11)
	16 and more years	18.90% (N = 7)

Source: own study.

3.3. Instrument

The LOT-R test is the most widespread and used optimism measurement tool (Lai, Yue, 2000; Steca, Monzani Greco, Chiesi, Primi. 2015; Schou-Bredal et al., 2017; Hinz et al., 2017), and has become a gold standard to measure disposable optimism (Cano-García, Sanduvete-Chaves, Chacón-Moscoso, Rodríguez-Franco, García-Martínez, Antuña-Belle-rín, Pérez-Gil, 2015). The Life Orientation Test (LOT) was developed by Scheier and Carver (1985) to assess dispositional optimism. The authors applied an initial set of 16 items to diverse student samples and obtained two factors by factorial analysis of the main factors with oblique rotation. After several revisions of this tool and application on various trials, the tool eventually consisted of twelve items: four to measure optimism, four to measure pessimism, and four to serve as fillers. Over time, many authors have questioned a predictive accuracy of LOT with regard to constructs such as neuroticism, trait anxiety, self-esteem, and self-control. This led to revision of LOT and ultimately to development of LOT-R (Scherier, Craver, Bridges, 1994). In LOT-R, three items included in the original LOT were eliminated, including two items measuring optimism and one measuring pessimism, and a new item measuring optimism was added (Cano-García et al., 2015). The Revised Life Orientation Test - LOT-R is a self-descriptive test for measuring dispositional optimism as described by Scheier, Craver, and Bridges. LOT-R is a shortened and revised version of the life orientation test - LOT, the revision process of which improved the psychometric features (Ottati, Noronha, 2017).

Currently, there is an ongoing debate on the dimensionality of LOT-R. However, the use of LOT-R as a two-factor scale runs counter to a theoretical definition of the scale that the authors originally described as a continuum in which pessimism and optimism are viewed as polar opposites rather than separate dimensions. In a recent review, the original authors continued to recommend the use of LOT-R as a one-dimensional scale in primary analyses. In addition, recent studies have given strong support for unidimensionality of LOT-R and have shown that the two-factor structure is an artifact of position formu-lation (Schou-Bredal et al., 2017), therefore, in this study, LOT-R is primarily used as a one-dimensional scale.

LOT-R is characterized by good internal consistency, Cronbach's alpha ranges from 0.70 to 0.80, and their test-retest correlations for the intervals from 4 to 28 months are from 0.68 to 0.79 (Scheier et al., 1994). In the Polish standardization sample consisting of 786 people aged 20–55, the average LOT indicator was 14.55 with a standard deviation of 4.05. The results do not differ from mean results for the American original version (Scheier et al., 1994). In the Polish version of the test, no differentiation of results according to gender, age and environment was found (Jurczyński, 2001).

The LOT-R test consists of 10 items, three of which are about optimism (items 1, 4 and 10), three are pessimism (items 3, 7 and 9) and four are distracting items (items 2, 5, 6 and 8), whose results are not calculated. The respondents respond to statements by indicating a degree of their compliance on a five-point Likert scale, from full disagreement to full consent (Ottati, Noronha, 2017).

The overall score ranges from 0 to 24 points and the higher it is, the higher the level of optimism (Schou-Bredal et al., 2017; Jurczyński, 2001). Walsh, McCartney, Van Der Pol, Buchanan, and Jones (2015) have proposed that a minimum score that can be computed is 0 (representing extreme pessimism) and the maximum being 24 (representing extreme optimism). Kreis, Molto, Bailly, Dodoun, Fabre, Rein, Hundry, Zenasni, Rozenberg, Pertuiset, Fautrel, Gossec (2015); Chakraborty (2016); Marotta, Sarno, Del Casale, Pane, Mogna, Amoruso, Felis, Fiorio (2019) proposed a sub-scale that converts the points obtained from the LOT-R test into the level of optimism. The scale is as follows from 0 to 13 points – low level of optimism, from 14 to 18 points - medium level of optimism, from 19 to 24 points – high level of optimism. Another scale was proposed by Jurczyński (2001), where a low level of optimism ranges from 0 to 12 points, an average level of optimism ranges from 13 to 16 points, and a high level of optimism ranges from 17 to 24 points. The article uses the scale proposed by Kreis et al. (2015); Chakraborty (2016); Marotta et al. (2019).

3.4. Statistical methods

In order to achieve the main goal and verify the main hypothesis, hypotheses about single means were tested using the Student's t-test. Student's t-distribution is the theoretical distribution of relative frequencies of all values of $\bar{X}$ transformed into t values, which we would get randomly if we were to extract an infinite number of samples from a population of a certain size. Formula to derive a mean from the sample (King, Minium, 2020):

$$t = \frac{\bar{X} - \mu_x}{s_{\bar{x}}} \tag{1}$$

$\bar{X}$ – mean obtained in the sample,
μ_x – hypothetical population mean,
$s_{\bar{x}}$ – estimation of a standard error of the mean.

The significance test for the mean (average) value is used to verify a hypothesis that the average value of a feature in the general population is equal to the so-called hypothetical value (specific number). We do verification using a simple n-element test. The null hypothesis takes the form H_0: $\mu = \mu\_x$, where μ_x is a hypothetical value. The alternative hypothesis can take one of three forms of H_1: (I) $\mu \neq \mu_x$; (II) $\mu > \mu_x$; (III) $\mu < \mu_x$ (Malska, Koziorowska, 2015).

Fischer's exact test was performed to investigate a relationship between the level of sentiment and sociodemographic variables. One of the conditions for applicability of the Chi-square test of independence is the expected number, which in each cell of the contingency table should be greater than 5. If the expected number is lower than 5 in at least one of the contingency table cells, the Chi-square test should be used instead Fischer's exact test, which has now been generalized to any two-dimensional table (Szymczak, 2018).

4. EXISTENCE OF EXCESSIVE OPTIMISM AMONG STOCK MARKET ANALYSTS PREPARING RECOMMENDATIONS

As a result of the survey research, the following results were obtained for the LOT-R test. The overall results of the mood for the entire study sample (N = 37) are presented in Table 2.

Table 2. Scores for the entire sample Life Orientation Test (LOT-R)

Results	Points	N	Percentage
Low level of optimism	0–13	14	37.80%
Medium level of optimism	14–18	14	37.80%
High level of optimism	19–24	9	24.40%

Source: own study.

As the table shows, 24.40% of the surveyed analysts are characterized by a high level of optimism (excessive optimism), 37.80% of the surveyed analysts have an average level of optimism, and 37.80% of the respondents have a low level of optimism, which can be identified with a tendency to pessimism. Table 3. presents descriptive statistics for the entire study group.

Table 3. Descriptive measures for the interval dividing series of the results of the Life Orientation Test (LOT-R)

Statistics		LOT-R points	Standard error
Mean		14.38	0.849
95% confidence interval for the mean	lower limit	12.66	
	upper limit	16.10	
5% trimmed mean		14.53	
Median		15	
Variance		26.686	
Standard deviation		5.166	
Minimum		3	
Maximum		24	
Gap		21	
Quarter gap		7	
Skewness		-0.607	0.388
Kurtosis		-0.252	0.759

Source: own study.

As shown in Table 3., the average score obtained by analysts was 14.38[3], the standard deviation is 5.166 points, the median is 15 points, which indicates that half of the analysts had moderate and high levels of optimism, while the other half had moderate and low levels of optimism. The variance is 26,686, which proves that this group is moderately diversified in terms of the intensity of optimism, and thus it is homogeneous. The variation area between the maximum and minimum score is 21 points. The distribution of the variable (number of points in the LOT-R survey) measured by the classic asymmetry coefficient (skewness) is characterized by a weak left-side asymmetry of - 0.607, which allows us to conclude that more analysts are above than below the average. The kurtosis is -252, indicating that the distribution of analyst participation is platykurtic, so the concentration of values around the mean is smaller than in the normal distribution (the distribution is more flattened).

In order to verify the hypothesis 1: Stock market analysts who prepare recommendations are overly optimistic, the Student's t-test was used for one mean, assuming a significance level of 0.05 and a hypothetical mean of 19 points, due to the interpretation of the results from the LOT-R test, where from 19 point begins with a high level of optimism.

Table 4. One-sample test

	Test Value = 19					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Points	-5.442	36	.000	-4.622	-6.34	-2.90

Source: own study.

Table 5. One-Sample effect values

		Standardisation	Point estimate	95% Confidence Interval	
				Lower	Upper
Number of points	Cohen's d	5.166	-.895	-1.273	-.508
	Hedges' correction	5.277	-.876	-1.246	-.497
a. The denominator used in estimation of the effect values. In the case of d Cohen the sample standard deviation is used. Hedges' correction uses the sample standard deviation, plus a correction factor.					

Source: own study.

Analysis with the use of Student's t-test for one sample shows that it is statistically significantly different from the adopted threshold for occurrence of a high level of optimism. Thus, it falls into the rejection area, which obliges us to reject the H_0 hypothesis in favour of the H_1 alternative. The value of the t-statistic expressed in terms of the estimated standard error of the mean is -5,442, which leads to a conclusion that analysts are below the threshold assumed for the level of high optimism.

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[3] The average value indicates the average level of positive orientation, it is in the point interval; of 14–18 points.

In order to better illustrate a structure of the analysed group of analysts, the further part of the paper presents a distribution of the level of analysts' optimism according to factors such as age, experience and education understood as professional licences, and shows that there are relationships between variables.

The first group listed among analysts is age. In order to determine whether there is a relationship between age and the level of positive orientation, the independence test χ^2 was performed.

A probability value in the two-sided Fisher's exact test is 0.834, so it exceeds the assumed significance level of $\alpha = 0.05$, i.e. the relationship between studied variables is not statistically significant. The percentage of analysts with different levels of optimism does not differ significantly in the age groups.

Table 6. Structure of analysts by age intervals, education and experience as well as the level of optimism

Variable	Factor	Low level of optimism	Medium level of optimism	High level of optimism
Age	25–34 years	13.50%	8.10%	5.40%
	35–44 years	13.50%	21.60%	10.80%
	44 and more years	10.80%	8.10%	8.10%
Certificate	lack	5.40%	5.40%	2.70%
	1 certificate	18.90%	13.50%	5.40%
	2 and more certificate	13.50%	18.90%	16.20%
Experience	5–10 years	21.60%	24.30%	5.40%
	11–15 years	8.10%	8.10%	13.50%
	16 and more years	8.10%	5.40%	5.40%

Source: own study.

Table 7. Calculations for the independence test χ^2 variable age

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	1.643a	4	.801	.834		
Likelihood Ratio	1.626	4	.804	.834		
Fisher-Freeman-Halton Exact Test	1.782			.834		
Linear-by-Linear Association	.323b	1	.570	.674	.337	.096
N of Valid Cases	37					
a. 7 cells (77.8%) have expected count less than 5. The minimum expected count is 2.43.						
b. Standardized value is .568.						

Source: own study.

The second specified group among analysts is education understood as capital market professional licences[4]. In order to determine whether there is a relationship between education and the level of positive orientation, the independence test χ^2 was performed.

Fisher's stat value: F = 2,420. The two-sided exact significance is 0.420, therefore it is higher than the assumed significance level of $\alpha = 0.05$. Therefore, it can be asserted that a relationship between possession of professional licence and the level of optimism observed in the sample is purely accidental, i.e. it is not an expression of a real cause-effect relationship between these variables.

Table 8. Calculations for the independence test χ^2 education variable

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	2.282a	4	.684	.681		
Likelihood Ratio	2.322	4	.677	.708		
Fisher-Freeman-Halton Exact Test	2.420			.693		
Linear-by-Linear Association	1.235b	1	.266	.306	.170	.065
N of Valid Cases	37					
a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is 1.22. b. 5 cells (55.6%) have expected count less than 5. The minimum expected count is 1.22.						

Source: own study.

The third group identified among analysts is experience. In order to determine whether there is a relationship between experience and the level of optimism, the independence test χ^2 was performed.

Table 9. Calculations for the test of independence χ^2 variable experience

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.960a	4	.291	.325		
Likelihood Ratio	4.994	4	.288	.355		
Fisher-Freeman-Halton Exact Test	4.864			.300		
Linear-by-Linear Association	.833b	1	.362	.422	.220	.071
N of Valid Cases	37					
a. 7 cells (77.8%) have expected count less than 5. The minimum expected count is 1.70. b. The standardized statistic is .912.						

Source: own study.

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[4] For simplicity reasons the paper does not mention the individual licences such as (Stock Broker, Investment Advisor, Chartered Financial Analyst, Certified International Investment Analyst) but only grouped into the following subsets: no licence, 1 licence and 2 or more licences.

Fisher's stat value: F = 4,864. Two-sided exact significance is 0.300, therefore it is higher than the assumed significance level of α = 0.05. Therefore, it can be asserted that a relationship between experience and the level of optimism observed in the sample is purely accidental, i.e. it is not an expression of a real cause-effect relationship between these variables.

5. CONCLUSIONS

After conducting statistical analyses, following the Student's t-statistics for one mean, the first hypothesis was verified. In other words, a statistical conclusion can be drawn that there are no grounds to believe that the average in the population from which this sample is derived is 19 points for the LOT-R test. Based on this test, it can also be concluded that the average is most likely lower than the adopted levels, which means that the analysts who prepare the recommendations do not show high, or overly optimism.

In order to make the studied phenomenon more precise, an analysis of the relationship between sentiment in psychological tests and sociodemographic factors such as age, education and experience was carried out. For them, the hypotheses H_2, H_3, H_4 were made.

Thanks to the division into particular sociodemographic features, conclusions were drawn in the scope of partial hypotheses from H_2 to H_4.

Socio-demographic variables, such as age, education and experience did not show a significant statistical effect on the level of sentiment. This did not allow for a positive verification of the hypotheses H_2, H_3, H_4.

The research conducted is different from the research previously conducted by other researches concerning excessive optimism among stock market analysts. The dissimilarity of the results is due to the fact that earlier studies focused on the occurrence of excessive analysts 'optimism in their recommendations as a forecast error, but did not investigate the psychological determinants of analysts' attitudes, contrary to the research presented in the paper.

Optimism is a quality that people can possess to varying degrees. Perhaps nature has equipped analysts with a basic level of optimism, the level of which, using psychological tests, can be estimated at an average level, while analysts, for various reasons, may reveal in the valuation of shares prepared for the needs of stock market recommendations a lower or greater intensity of this feature. This may be due to the presence of cognitive biases, heuristics, and emotions that emerge in the real valuation process.

Stock market analysts may try to explain over-optimism in stock valuations by the fact that analysts use both advanced and heuristic pricing models to determine target prices (e.g., Demirakos Strong, Walker, 2010; Imam, Chan, Shah, 2013; Gleason, Johnson, Li, 2013). The choice of analyst pricing model depends on various factors, such as an analyst and a company characteristic, customer preferences and market prices (e.g. Glaum, Friedrich, 2006; Imam, Barker, Clubb, 2008; Demirakos et al., 2010; Imam et al., 2013).

Due to a conflict of interest between branches of a company, and in particular because individuals are responsible for servicing brokerage houses or banks, reports prepared by analysts may not be completely independent and objective (Imam et al., 2013). In other words, an analyst may feel pressure to issue purchase recommendations if the company employing him/her simultaneously handles the issuing process of a given company. Investors should consider the possibility of an error on the analyst's side and consider the

specificity of his/her company, this will help investors choose the most objective reports (Baker, Filbeck, Nofsinger, 2021).

Another explanation for the optimism in the valuation of recommendations may be that professional analysts often do not want to take positions that are fundamentally different from those taken by other analysts. They are afraid that in the event of a mistake their mistake will be remembered for a long time and, as a result, their competence will be doubted. They feel safe by following the crowd. They assume that clients will be more likely to forgive them for an inaccurate analysis if it is consistent with recommendations of many experts and an error is collective, not individual. The effect of a sheep's rush, devoid of logical justification, may lead to a significant shift in the valuation of shares from their intrinsic value. This phenomenon is very characteristic of analysts who prepare recommendations. American economist Edgar Fiedler noted: "the herd instinct among forecasters makes sheep look like independent thinkers" (Baker et al., 2021).

Concluding, the literature provides two explanations as to why target prices only have a limited investment value for investors (Buxbaum, Schultze, Tiras, 2019):

- are optimistically biased as a result of job-related analysts' incentives,
- are based on insufficient valuation assumptions and techniques leading to forecasts that do not accurately reflect intrinsic values.

Conclusions resulting from the conducted research make it possible to indicate specific directions that should be considered when conducting further research in this area. One of the directions that can be outlined is a research analysing which factors increase optimism in the real process of making recommendations. Another direction of research may be an analysis of what neurobiological mechanisms regulate the optimistic cognitive bias. Such research may allow for a better understanding of decision-making mechanisms.

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AN APPROACH TO PREDICT CUSTOMER SATISFACTION WITH CURRENT PRODUCT QUALITY

Improving product quality is still a challenge; therefore, this article aims to propose an approach to predict customer satisfaction. We implemented the following techniques: the SMART(-ER) method, brainstorming (BM), a Likert-scale survey, the Pareto rule, the WSM method, and the Naive Bayes Classifier. Customer expectations were obtained as part of the survey research. Based on these, we determined customers' satisfaction with the current quality of the criteria and the weights of these criteria. We then applied the Pareto rule, the WSM method, and the Naive Bayes Classifier. In the proposed approach, it was predicted that current product quality is not very satisfactory to customers; that conditioned the need for improvement actions. The originality of the study is the ability to predict customer satisfaction while taking into account the weights of this criterion. The proposed approach can be used for any product.

Keywords: predicting of quality, product quality, customer satisfaction, decision support, Naive Bayes Classifier, Weighted Sum Model, production engineering.

1. INTRODUCTION

In well-prospering organizations, it is important to continuous product improvement (Pacana, Siwiec, 2021). To do that, it is necessary to obtain customers' expectations and market requirements. It refers not only to new products, but also existing products, where it refers to determining customers' satisfaction with current product quality. Based on the satisfaction of determined customers, it is possible to make a decision about a need to initiate improvement actions and ongoing verification of product quality and customer satisfaction. According to (Giemza, 2006), customer satisfaction is the degree (level) on which customers' expectations are achieved. Therefore, it is important to determine these expectations and the degree to which they are met. These actions also include predicting the level of product quality level (Wu, Shieh, 2006). It provides to determine product quality ahead of the competition, and this quality will satisfy the customer's requirements (Siwiec,

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Pacana, 2021). Therefore, modern organizations are searching for different solutions to support this process.

The literature review has shown that the HoQ method (House of Quality, or QFD – Quality Function Deployment) (Hauser, 1993; Kurniawan, Wijayanti, 2020) is the most often used tool to design and improve products. The idea of HoQ is assumed to be that products should be designed in a way that reflects customer requirements and preferences. Therefore, in HoQ, the relations between customer expectations and technical requirements are determined (Temponi, Yen, TIao, 1999). Currently, the HoQ is well known and often modified. For example, the authors (Dincer, Yuksel, Marinez, 2021) have determined criteria, dimensions, and alternatives for developing new services in the medical industry. That relied on developing a model according to the 2-tupe linguistic, Interval-Valued, and the DEMATEL extension. In turn, in this work (Temponi, Yen, Tiao, 1999), an extension of HoQ was developed by implementing fuzzy logic. The aim was to obtain imprecise customer expectations and support the team of experts in concluding implicit relations between requirements. Whereas, the author of this work (Shrivastava, 2013) presented a method of creating HoQ according to six stages, i.e.: customer expectations, technical requirements, planning matrix, matrix of interconnectedness, matrix of technical correlations, and prioritized section or patterns and goals. Another example is the work (Abdulkerim, Avvari, Cherkos, 2019), in which the HoQ and the SERVQUAL method are combined. That relied on measuring the quality of service, designing and improving products to achieve customer satisfaction. However, in this work (Xie, Qin, Jiang, 2020), the decision method was developed, which was implemented in the HoQ. This method supported the choice of technical properties, where a rough sets algorithm or correlation matrix was used. For example, the relations of customer demand and the importance of technical attributes were verified. The test was carried out for the mobile phone.

Then, in this work (Moradi, Raissi, 2015), the linear programming in HoQ was realized to determine customers' preferences in mathematical terms. Another example is the work (Erdil, Arani, 2018), in which new areas of application of the HoQ method to improve product quality were proposed. The concept consisted of determining a new framework for the implementation of the HoQ method. In turn, in this work (Miao, Liu, Chen, 2015), the two models were developed to verify different design scenarios in an uncertain environment. The models were verified by car design. In the context of predicting product quality, the Naive Bayes Classifier was often used (Piątkowski, 2014). For example, in the article (Li, Li, 2014), the stability of the product was predicted according to Bayes' theorem. The method was supported by OptumG2 programming, which allowed analysis of the reduction of endurance. The Bayesian classifier allows to determine the stability and instability of the product state. In turn, the authors (Abellán, Castellano, 2017) proposed a method based on the measure of Info-Gain, which is combined with Bayes Classifier. The purpose is to predict a large number of data, where this method is effective in selecting and choice variables. Whereas, in this article (Trovato, Chrupała, Takanishi, 2016), the method of using imprecise knowledge of the man was developed. This method is integrated with Naive Bayes Classifier and has applications in the integration of man and robots.

After a review of the literature, it was concluded that there are methods to obtain customer expectations and predict the quality of the product. For this purpose, the HoQ method and the Naïve Bayes Classifier are mainly used. However, it is still searching for a method to predict customer satisfaction according to current product quality. It refers to

the need to develop approach, which will be able to determine the level of customer satisfaction from the current (existing) product and make decisions about the need to take improvement actions.

Therefore, the aim of the article was to propose an approach to predict customer satisfaction from the current product quality. As part of the analysis, the thesis was assumed to be the following.

Thesis: It is possible to estimate the current product level according to customer satisfaction from current product criteria and the weights (importance) of these criteria and then predict customer satisfaction from the current product.

The approach test was done for the domestic vacuum cleaner, which was produced in the Podkarpacie company.

2. APPROACH

The proposed approach aimed to predict customer satisfaction from the current product quality. To this aim, the seven major stages were captured in a single coherent model (Figure 1). In this approach, the selected techniques were integrated, i.e.: SMART(-ER) method (Lawlor, Hornyak, 2012), brainstorming (BM) (Putman, Paulus, 2011), questionnaire with Likert scale (Altuntas, Özsoy, Mor, 2019), Pareto rule (Hoła, Sawicki, Szóstak, 2018), Weighted Product Model (WPM) (Kumar et al., 2021), and Naïve Bayes Classifier (Abellán, Castellano, 2017).
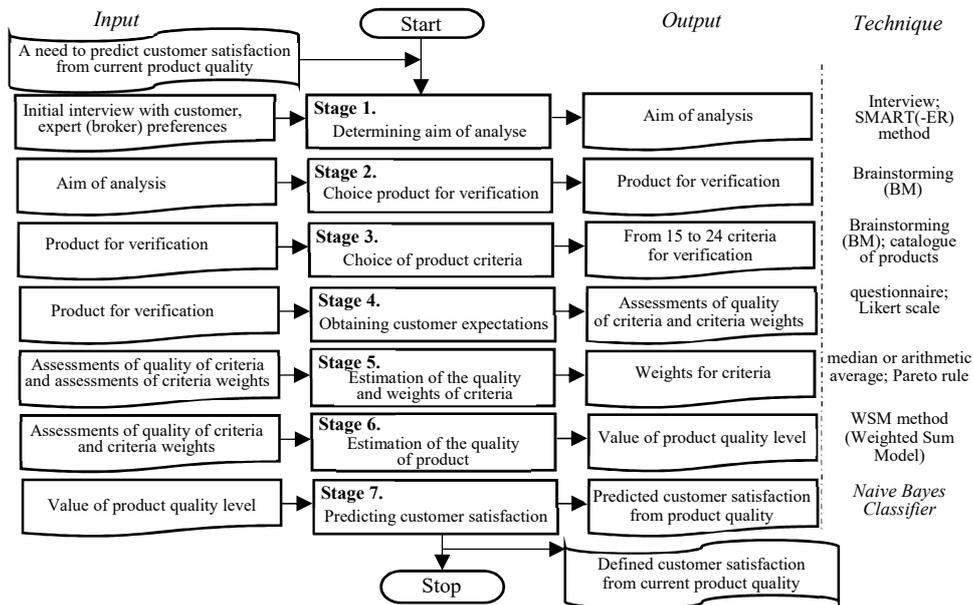
Figure 1. Model to predict product quality according to current customer satisfaction

Source:. Own study.

The short characteristic of the proposed approach is shown in the next part of the study.

Stage 1. Determining aim of analyse. It was assumed that the aim is determined by the entity (broker, expert). In the proposed approach, the aim was to determine customer expectations and then predict customer satisfaction from current product quality. To determine the aim, it is preferred to use the SMART(-ER) method (Lawlor, Hornyak, 2012).

Stage 2. Choice product for verification. At this stage, it is necessary to choose the product to analyse. The verification product for verification can be in the declining or maturity phase. The choice of product results from entity preferences using the proposed approach.

Stage 3. Choice of product criteria. It relies on determining the criteria possible to include in predicting product quality. It was assumed that these criteria are determined by group technical criteria (quantity), i.e., bases criteria determined the quality of the product. These criteria are selected according to the catalogue (specification) of products. These criteria are determined by a team of experts during brainstorming (BM) (Putman, Paulus, 2011). Following the authors (Siwiec, Pacana, 2021), it was assumed that the number of all criteria should be equal from 10 to 25 criteria. It is necessary to determine a single group of criteria that are characterized by all verified criteria.

Stage 4. Obtaining customer expectations. The aim of this stage is to determine customer satisfaction from current criteria and determine the weights (importance) of the criteria for customers. The number of customers results from the need of entity (expert, broker). The number of customers refers, e.g. obtaining expectations as part of initial research (n<100) or representative research (n>100). Following the authors (Muttaqi'in, Katias, 2021), it was assumed that to obtain customers' expectations the questionnaire was used. It was assumed that the questionnaire can be useful to customers in determining their preferences. The questionnaire should be allowed to determine customer satisfaction from the quality of the criterion and its importance (weights). The questionnaire should be allowed to determine customer satisfaction from the quality of the criterion and importance (weights) of these criteria. Therefore, the questionnaire included all product criteria that were selected in the third stage of the concept. These criteria should be characterized according to a catalogue (specification), e.g., by value or parameter. The Likert scale was used to determine customer satisfaction with the criteria for the products. The customer assessed each of the criteria by giving grades from 1 to 5, where 1 - criterion practically does not meet the client's expectations (the quality level of the criterion is unsatisfactory), 5 - criterion fully meets the client's expectations (the quality level of the criterion is satisfactory). Then, for all criteria, it is necessary to determine the weights (important criteria for customers). The weights are determined in the Likert scale, i.e., from 1 to 5, where 1 is the less important criterion, 5 is the most important criterion. Weights have to be determined for all verified criteria.

Stage 5. Estimation of the quality and weights of criteria. The quality of the criteria and weights of criteria were assumed to the be determined according to assessments from the questionnaire. The satisfaction of the customer with the quality of the current criteria and the importance of these criteria were obtained in the fourth stage. The quality of the criteria is determined by values on the Likert scale. Therefore, to estimate the importance of these criteria, it was assumed that the weights of these criteria were calculated according to weights assumed by the customers. Following the authors of the work (Siwiec, Pacana, 2021), it was assumed that for the small number of customers (n<100) the median of all evaluations of the weight of criteria is calculated. In turn, for a large number of customers

(n>100), the arithmetic average of all assessments of criteria weights is calculated. Based on the weights (importance) of the criteria, it is possible to determine the most important (so-called key) product criteria. To this aim, the Pareto rule (20/80) is used, as shown in the literature (Hoła, Sawicki, Szóstak, 2018). The criteria, which weights, are 20% of all the criteria weights are criteria from which the improvement actions are taken first. The improvement of these criteria increases customer satisfaction.

Stage 6. Estimation of the quality of product. This stage relies on the estimated quality considering customers' expectations for all verified products. It was assumed that in this aim, the values (assessments) of quality of the criteria (from stage 4) are included, and then are integrated with the weights of these criteria (from stage 5). It is necessary to estimate the quality of product separately for each customer who participated in the study. To estimate the quality of product, the WSM method (Weighted Sum Model) is used (Siwiec, Pacana, 2021; Kumar et al., 2021; Keshavarz-Ghorabaee, 2021). The choice of this method was conditioned by its effectiveness in estimating product quality. Additionally, this method allows one to the quality estimate quality according to assessments of quality of criteria and the weights of these criteria. The next benefit of the WSM method is the possible estimation of quality according to different criteria measures. Therefore, there is no need to normalize of assesses. Formula (1) allows estimating product quality according to the WSM method (Kumar et al., 2021; Siwiec, Pacana, 2021):

$$A_i^{WSM} = \sum_{i=2}^{n} w_j^t x_{ij} = Q_i \qquad (1)$$

where: w – weight of the criterion (from stage 5), x – quality of the criterion (from stage 4), i – customer, i, j = 1,…, n.

According to the assumption approach, the number of quality levels () should be equal to the number of customers. The quality of the product is used to predict the satisfaction of customers. It is shown in the next stage of the approach.

Stage 7. Predicting customer satisfaction. As part of predicting customer satisfaction, it was assumed that the Naïve Bayes Classifier was used (Abellán, Castellano, 2017; Piątkowski, 2014; Trovato, Chrupała, Takanishi, 2016). The idea is to use the initial satisfaction of individual customers to predict the satisfaction of the general community. The Naïve Bayesian Classifier is used for that. To this end, it is necessary to present the quality of the product (Q_i) as decimal value (2):

$$Q_i^p = \frac{Q_i}{1000} \qquad (2)$$

where: Q – quality of the product, i – 1, 2, …, n.

Then, for each value of product quality, it is necessary to note the state of customer satisfaction. This state is determined according to the proportion of values for estimated product quality levels, e.g., the level is not very satisfactory, moderately satisfactory, and very satisfactory. For this purpose, formulas (3–5) are used:

$$\max_{i=1} Q_i^p = Q_i^{vs} \quad \text{and} \quad < Q_i^{vs}; Q_i^{as}) \quad - \text{product quality very satisfactory} \qquad (3)$$

$$\min_{i=1} Q_i^p = Q_i^{nvs} \quad \text{and} \quad (Q_i^{as}; Q_i^{nvs}\rangle \quad - \text{product quality is not very satisfactory} \quad (4)$$

$$\frac{\max_{i=1} Q_i^p + \min_{i=1} Q_i^p}{2} = Q_i^{as} - \text{product quality is fairly satisfactory on average} \quad (5)$$

where: i = 1, 2…, n, i – customer.

Then, it is possible to predict customer satisfaction from current quality of the product. The Naïve Bayesian Classifier is used, which is the method of machine learning. It is effective in determining the category of case (Abellán, Castellano, 2017; Piątkowski, 2014; Trovato, Chrupała, Takanishi, 2016). The Classifier is not a complicated decision method, which has application to verify qualitative and quantitative data. The Bayes Classifier is also a tool of STATISTICA 13.3. Therefore, the process of predicting product quality can be more effective. In the Naïve Bayesian Classifier, the data representing customer satisfaction are considered as vectors $x = [x_1, x_2, \ldots, x_r]$, whose individual components are the so-called traits or attributes (x_k), where r – number of attributes. In the case where k is conventional, then l_k takes different values. The sets of customers' expectations (so-called vectors) are separated into subsets (classes), where it is assumed that classes are separable and its sum is equal to the whole area. Hence, it is assumed, that each point belongs exactly to a single class (subset), where C – collection of all classes, c – single class, then $c \in C$. The Bayesian formula includes conditioned probability, where A and B – observation of random events, P(A) – probability of event A, whereas $P(A|B)$ – probability of A occurrence provided that B has occurred (6) (Piątkowski, 2014; Trovato, Chrupała, Takanishi, 2016):

$$P(A|B) = \frac{P(A \cap B)}{P(B)} \quad (6)$$

where: $A \cap B$ – simultaneous occurrence of A and B, therefore the probability is also referred to as (7) (Abellán, Castellano, 2017):

$$P(A|B) = \frac{P(B|A)P(B)}{P(A)} \quad (7)$$

The Bayesian formula allows expressions shown expressions for the most probable class *(np)* (8) by formula (9) (Trovato, Chrupała, Takanishi, 2016):

$$c_{np} = \arg \max_{c \in C} P(c \mid x_1, x_2, \ldots, x_r) \quad (8)$$

$$c_{np} = \arg \max_{c \in C} \frac{P(x_1, x_2, \ldots, x_r \mid c) \, P(c)}{P(x_1, x_2, \ldots, x_r)} \quad (9)$$

In turn, the elements in the denominator are not dependent on class, therefore the result of classification is not changed (10) (Abellán, Castellano, 2017; Piątkowski, 2014; Trovato, Chrupała, Takanishi, 2016):

$$c_{np} = \arg \max_{c \in C} P(x_1, x_2, \ldots, x_r \mid c) \, P(c) \quad (10)$$

In case where probability shown by formula (10) is known, or it is possible to estimate it, it is necessary for use it directly to the classification. The model, which is created based on this formula, is the so-called optimal Bayesian classifier. Predicting customer satisfaction with the product quality level is carried out depending on the estimated quality levels. The maximum probability value determines the level of customer satisfaction with the quality of the current product quality.

3. TEST OF APPROACH

The test of the approach was performed for the domestic vacuum cleaner. Research was carried out in an initial research group equal to 24 customers. The sample size was obtained in 2020.

According to the first stage, the objective of analyse was determined. It was assumed that purpose is to predict customer satisfaction from the current quality of the domestic vacuum cleaner.

As assumed in the second stage, the product for verification was selected. It was a domestic vacuum cleaner, which was produced in the Podkarpacie enterprise. This product was in the maturity phase. The choice of this product was conditioned by the need to determine customers' satisfaction and make decisions about improvement actions.

In the third stage, the product criteria for verification were selected. These criteria were selected after brainstorming (BM) was performed in a group of experts. Moreover, the choice of criteria was based on the vacuum cleaner catalog (specification). Those were technical criteria which generated the quality of the product. According to the proposed approach, ten main criteria were determined, i.e., engine power, suction power, cable length, power cord winding system, operating range, dimensions, weight, noise level, type of dust filter, and type of bag.

According to the fourth stage, the customers' expectations were obtained. To this end, the survey was carried out on the Likert scale was carried out. It was an initial research, which was performed in 2020 on 24 customers. The survey included the stage of determining the weights of the current criteria of vacuum cleaner criteria and the stage of determining the satisfaction of the quality of these criteria. The questionnaire included all criteria from the fourth stage. These criteria were characterized according to the vacuum cleaner by current values (parameters) that characterize them.

Then, as assumed in the fifth stage, the quality and weights of the criteria were estimated. The quality of the criteria was customers' assesses of their satisfaction with the current criteria. In turn, the weights of criteria were estimated as the median of all customers' assesses of importance of these criteria. It was the result of the number of customers (n=24, where n<100). According to the Pareto rule, the most important criteria for customers were selected (Figure 2).

According to rule 20/80, the most important criteria were suction power and engine power. It was concluded that these criteria should be improved at first to achieve an increase in customers satisfaction.

In the sixth stage, the quality of the vacuum cleaner was estimated. In this aim, the WSM method is used. The quality of the vacuum cleaner was estimated according to the evaluations of all customers. In this aim, the weights of the criteria (median of weights) and each assessment of customer satisfaction from these criteria were included. The result is shown in Table 1.
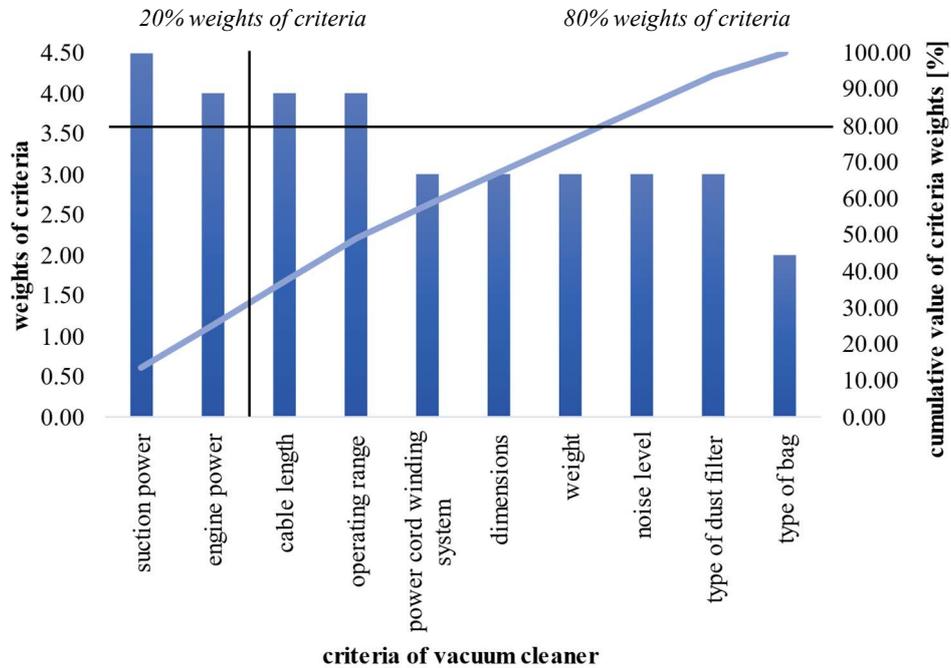
Figure 2. Pareto-Lorenz chart for weights of vacuum cleaner
Source: Own study.

Table 1. The level of quality of the vacuum cleaner according to the customers

Customer	Quality level		Customer	Quality level	
	Q_i	Q_i^p		Q_i	Q_i^p
1	106,00	0,11	13	109,50	0,11
2	90,00	0,09	14	113,50	0,11
3	100,50	0,10	15	99,50	0,10
4	101,50	0,10	16	110,00	0,11
5	132,00	0,13	17	104,00	0,10
6	89,50	0,09	18	117,00	0,12
7	102,50	0,10	19	106,50	0,11
8	105,00	0,11	20	94,50	0,09
9	92,00	0,09	21	120,50	0,12
10	107,00	0,11	22	115,00	0,12
11	126,50	0,13	23	94,50	0,09
12	92,50	0,09	24	121,00	0,12

Source: Own study.

The 24 vacuum cleaner quality levels, and that number resulted from the number of customers participating in the study. On the basis of these quality levels, the customers' satisfaction was predicted.

In the seventh stage, customers' satisfaction with the current quality level of vacuum cleaner quality was predicted. The Naïve Bayes Classifier was used for that. According to formula (2), the vacuum cleaner quality levels of vacuum cleaner were processed into decimal values (Q_i^p). Then, for these values, states of customer satisfaction were noted as states of customers satisfaction which were determined according to formulas (3-5). The results are shown by formulas (11-13):

$$\max_{i=1} Q_i^p = Q_i^{vs} = 0,13 \quad \text{and} \quad < 0,13; \ 0,11) \quad - \text{product quality very} \quad (11)$$
$$\text{satisfactory}$$

$$\min_{i=1} Q_i^p = Q_i^{nvs} = 0,09 \quad \text{and} \quad (0,11; \ 0,09 > \quad - \text{product quality is} \quad (12)$$
$$\text{not very satisfactory}$$

$$\frac{\max\limits_{i=1} Q_i^p + \min\limits_{i=1} Q_i^p}{2} = Q_i^{as} = 0,11 - \text{product quality is fairly satisfactory} \quad (13)$$
$$\text{on average}$$

where: i = 1, 2…, n, i – customer.

Customers' satisfaction states with the current quality of the vacuum cleaner are shown in Table 2.

Table 2. Customers' satisfaction with the current quality of the vacuum cleaner

Customer	Quality level		Customer	Quality level	
	Q_i^p	Satisfaction state		Q_i^p	Satisfaction state
1	0,11	average satisfying	13	0,11	average satisfying
2	0,09	not very satisfying	14	0,11	average satisfying
3	0,10	not very satisfying	15	0,10	not very satisfying
4	0,10	not very satisfying	16	0,11	average satisfying
5	0,13	very satisfying	17	0,10	not very satisfying
6	0,09	not very satisfying	18	0,12	very satisfying
7	0,10	not very satisfying	19	0,11	average satisfying
8	0,11	average satisfying	20	0,09	not very satisfying
9	0,09	not very satisfying	21	0,12	very satisfying
10	0,11	average satisfying	22	0,12	very satisfying
11	0,13	very satisfying	23	0,09	not very satisfying
12	0,09	not very satisfying	24	0,12	very satisfying

Source: Own study.

According to the determined states of customers' satisfaction, the general customer satisfaction from the current quality of the vacuum cleaner was predicted. The Naive Bayes Classifier in STATISTICA 13.3. was used for that. The results are shown in Table 3.

Table 3. Predicted customer satisfaction from the current quality level of the vacuum cleaner

Class of state of customer satisfaction from current quality of vacuum cleaner	A priori value	Average value	Standard deviation
very satisfying	0,25	0,12	0,00
not very satisfying	0,46	0,10	0,00
average satisfying	0,29	0,11	0,00

Source: Own study.

After verification, it was predicted that the current quality of the vacuum cleaner is not very satisfactory (0,46) to customers. As part of an increase in customer satisfaction, it is necessary to improve the product. According to the Pareto rule, it was concluded that the suction power and engine power should be improved at first. If there is a need to improve these criteria, it is possible to achieve an increase in customer satisfaction. Subsequently, improvement actions should be taken for the remaining criteria.

4. DISCUSSION AND CONCLUSION

Improving the quality of products is the main action in well-benevolent organizations. Therefore, it is necessary to recognize customer expectations and market requirements. In this aim, it is effective to determine the current level of quality and predict customers' satisfaction with this quality. Then, it is possible to make a decision on the need to initiate improvement actions. In turn, it is also useful to determine the criteria from which these improvement actions should be realized. Therefore, the purpose of the article was to propose an approach to predict customers' satisfaction with the current product quality. In this approach, techniques were integrated, i.e.: SMART(-ER) method, brainstorming (BM), questionnaire with Likert scale, Pareto rule, WSM model, and Naïve Bayesian Classifier. An approach test was carried out for an example of a domestic vacuum cleaner. Research was carried out based on an initial sample size equal to 24 customers. This sample size was obtained in 2020. The quality of the vacuum cleaner was determined by criteria, i.e.: engine power, suction power, cable length, power cord winding system, operating range, dimensions, weight, noise level, type of dust filter, and type of bag. Customers' expectations were obtained as part of survey research on the Likert scale. The survey included the stage of determining the weights of the current criteria of vacuum cleaner criteria and the stage of determining the satisfaction of the quality of these criteria. According to Rule 20/80, the most important criteria were: engine power and suction power. It was concluded that these criteria should be improved at first to achieve an increase in customer satisfaction. Then, according to the WSM method, the current quality of the vacuum cleaner was estimated. The quality was estimated for each customer. According to quality levels, states of customer satisfaction were determined, that is, very satisfying (0,13), average satisfying (0,11), and not very satisfying (0,09). Next, general satisfaction with the current quality of the vacuum cleaner was predicted. The Naïve Bayesian Classifier in STATISTICA 13.3. was used. As a result, it was predicted that the current quality is not very satisfying for customers (0,46). It was shown that at first, it is necessary to verify satisfaction of the most important criteria (i.e., engine power and suction power). Then, it is necessary to take improvement actions for other criteria.

Main benefits of the proposed approach:
- determining customers' satisfaction with current product criteria,
- determining weights (importance) of current product criteria and important choice important criteria for customers,
- estimating the current quality of product according to assessments of satisfaction with criteria and weights of these criteria,
- predicting customer satisfaction from the current quality product level,
- possible to use the approach for any number of customers,
- useful approach to verify any products.

The disadvantages of this approach: a lack of predicting expected quality of product and also necessary changes of criteria. Therefore, future research will be based on adapting the approach to predict the expected quality of the product based on the current quality level.

It was recognized that the proposed approach may be beneficial for various organizations that strive to meet customer expectations. Additionally, this approach can be useful in predicting the quality of any product.

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