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## 1. Introduction

Decision-making is a process of choosing one of at least two possibilities, solutions or lines of approach, desirable in terms of the needs of the system under which the choice is made (Penc 1995). The decision itself is one of the steps in a complex decision-making process consisting, among others, in the identification of the decision problem, determination of the selection criteria, development of the decision-making variants and their analysis, the choice itself, i.e. making a decision and implementing it, as well as a continuous implementation monitoring and a possible adjustment of measures (Bolesta-Kukułka 2003). The decisions taken translate into the results achieved by the organization, hence the greater experience and decision-making skills of the managers, the higher chances of the organisation's success.

Due to the significance of the decisionmaking process, it seems reasonable to

[^0]carry out research in this area with regard to public organisations in which the decision-making process differs significantly from the decision-making in commercial organisations which is fairly well-recognized in literature (Fracczkiewicz-Wronka 2012). Therefore, the author has posed the question which decision-making models can be identified in practical functioning of public healthcare entities. The attempts to answer this research question are based on the classifications of the decision-making models in public organizations, developed by Paul Nutt, who has identified five main models (Nutt 1984). The research was conducted using qualitative methods (interview) on the basis of the approach P. Nutt which is based on the reconstruction of the decision-making process (Nutt 1984). The first part of the article presents the characteristic features of the decision-making process in public organisations, which have already been identified in the source literature. In the second part the attention was focused on research procedure itself, and the last part is devoted to the discussion of the test results obtained.

## 2. The decision-making process in public organisations

Essentially, both in private and public organisations the management comes down to decision-making, however, it should be borne in mind that the decisionmaking process in public organizations differs fundamentally from the decisionmaking process in commercial organisations, both in terms of the process itself and its determinants (Frączkiewicz-Wronka, Dyaczyńska, Szymaniec 2010).

The source literature indicates that private organizations have definitely smoother and quieter decision-making processes (Nutt 2005). On the other hand, public organisations experience more turbulence, breaks, recirculation and conflicts. These differences are attributed by the researchers to the roles of public and private organisations in society. Commercial organisations act with the aim to make profit, while public organisations pursue goals of social importance, the hierarchy of which is changed from time to time and dependent on the currently prevailing political forces and electoral preferences.

The decision-making process in the public sector organisations is complex. The managers, when performing their tasks, are forced not only to strive to achieve economic efficiency, but also to consider social and political consequences of their actions. The source literature indicates four main approaches to decisionmaking in public organisations (Rainey, Chun 2005).
The first approach assumes that decision- making is a rational process, in which the decision-makers operate in accordance with the established
scheme of the decision-making process (Frączkiewicz-Wronka et al. 2010). The course of individual stages will differ in private and public organizations. Public organisations often have a limited ability to collect necessary data and information due to limited budget. Insufficient information predetermines a negative impact on the rationality of the decision-making process. Limitations also result from course of internal processes and enforceability of results (Hanna, Daim 2007).

The second approach considers decision-making in public organizations in accordance with the situational approach. Rational decision-making determined by stable, firm conditions in public organizations is difficult because of the political conditions, but if the level of consensus of goals among decision makers and the level of their knowledge are high, the rational process is likely to occur (Frączkiewicz-Wronka et al.2009).
The process of decision-making can also be considered as gradual, incremental decision-making. The response of decision-makers to the political consensus leads to ambiguity of goals, and thus to the limitation of changes and selection of the least controversial option. At the same time, decision-makers provide a high level of success in achieving the vague objectives and decisions are made when there is such a chance or necessity. The scope of the qualifications and responsibilities in terms of decision-making is not clear in this model. Rational actions are replaced by searching for solutions of the problems, before founding them, and obtaining support for the previously planned activities.
The last, fourth approach assumes that the rules and regularities of general management are applicable in public management, however, referring them to the public organizations, it is necessary to take their specificity into account , i.a. (D'Aunno, 2003):

- the existence of many stakeholders, whose interests do not coincide and sometimes are disputatious (Lakhani Wronka 2012),
- large impact of stakeholders that have a significant power,
- decision-making rarely performed in a rational way due to operation in a highly political environment,
- lack of profits as a measure of efficiency, evaluating, at the same time, political interests and legislative elections, from the point of view of citizens' preferences,
- less susceptibility of the participants to financial incentives, and more focus on the mission of the organization, need to cross the organizational barriers in order to recognize various aspects of problem solving, relatively high public visibility and transparency of intra-organizational activities.

The differences in decision-making in the private and public sector organizations were also pointed out in the works of $\operatorname{Nutt}(1999,2005)$ :

- in public organizations decision-makers must recognize the market, because it is created by state authorities, and behaviour of buyers is the factor defining the market for private organizations,
- in public organizations, cooperation replaces competition,
- in public organizations, there is greater need for consensus and simultaneous pressure to understand the mandates and commitments, and the range of choices available is smaller. In private organizations autonomy and flexibility of an organization is limited only by law and internal needs of the organization,;
- in public organizations more time is needed for balancing expectations of the users with the requirements of the authorities, which is a result of networks between the users and authorities,
- in public organizations the need for opening the processes of external participation is increasing, it is difficult to keep the decision-making in secret,
- in public organizations the need for determining public expectations regarding the way in which the service is provided is increasing because the citizens behave like shareholders and often impose their expectations concerning activities of the organization,
- in public organizations, clarity of selection criteria is decreasing, there is the need to take into account the soft criteria and the criteria that will ensure equal access to the services,
- in public organizations the need for bargaining over resources is increasing, decision-makers have less power enabling them to change the shape of organization, also the time to search for options for this change is more limited.


## 3. The reconstruction process of Paul Nutt's decision-making process as the analysis method of a decision-making process

Restoration of processes taking place in an organization requires the researcher both to collect data, which present a certain organizational history and to search for certain pattern in them (Daft 1983). The scheme of the pattern search in the decision-making process within an organization using the reconstruction process was detailed by Paul Nutt and was presented in the article entitled Types of Organizational Decision Processes in 1984. The method suggested by P. Nutt was based on the interviews with decision-makers which triggered the restoration of a selected strategic decision-making process - the reconstruction process. The restoration process included the analysis of the responses obtained
from the interviewed, which subsequently were arranged and assigned to the appropriate phase of decision-making. According to the assumption concept of Nutt the decision-making process consists of the following phases \{Nutt 1948):

1. Defining a decision problem - understanding the problem with the concurrent examining the needs and capabilities of the organization as well as specifying the objectives.
2. Conceptualization - generating solutions to achieve the previously set aims.
3. Specification of solutions - the proposed solutions are detailed to make them become operational in order to test their feasibility.
4. Assessment/evaluation-put the costs and benefits of the proposed solutions under analysis.
5. Implementation - the choice and its implementation to the organization

The responses of the interviewed were assigned to the appropriate phase by means of comparing the respective phases and the individual activities of the respondents with the definition goals of each of the phases indicated above. It should be noted that the presented action cycle is of purely representative nature, in practice managers more likely do not execute all the phases and steps outlined but most frequently they shift from problem formulation to implementation. The provided scheme aims at profiling the decision-making process as well as determining its type. P. Nutt recommended 5 types of a decision-making process varying not only in the amount of phases within this process but also in the diverse significance of each phase (Nutt 1984).

The research performed by P. Nutt revealed that the organizations under analysis most frequently used the so-called the model based on earlier decisions (the historical decision-making model) Within this model the phases of formulation, specification and implementation are included. The key phase of this model is the specification phase. The phase of solution conceptualization has not been included within the model because the solutions derived from the practices of other organizations are applied (e.g. the ones derived from competition). This model allows the decision makers to conceptualize a real situation which strengthens their belief of its feasibility, which makes it a tangible and strong basis for decision-making. The large popularity of this solution results from relatively low costs of its application. It uses methods such as: recruiting employees with extensive professional experience as well as adopting consulting companies (making decisions on the basis of the activities they were being used in other companies), tracking websites, copying systems or perusing literature (relatively seldom due to the required time dedication). We learn from the decisions of other organizations.

Another model is based on using available solutions. It comprises the phases of formulation, specification, assessment and implementation. The decision makers mainly focus on identifying the best available solutions which subsequently are assessed in terms of their best adjustment to the existing conditions and finally are adapted to the needs of the organization. The key phase is the specification phase. It uses techniques such as consulting.
The model concentrating on the assessment of solutions. It comprises the phases of formulation, assessment and implementation with the phase of evaluation being the most significant one. This duration of the evaluation phase enables the decision makers to focus on primarily on ideas of which the value is unknown or disputable. Afterwards the assessment results are applied to obtain the necessary support in the implementation phase. This model builds a strong motivation to action, but it does so at the expense of specification. Frequently, the specification and the detailing of the idea are performed during its implementation, which enforce the necessity to re-evaluate the processes functioning within the organization.

The model concentrating on the process of solution research. It includes the phases of formulation and implementation. This process can be observed when the decision makers realizes the existence of the problem, but they lack practicable solutions. It should be noted that within this model the search for solutions is quite passive, and the decision makers tend to comply with the one which in their understanding settles the problem, without the issue being further assessed or specified. If the solution satisfies the problem under consideration it is a sufficient justification for decision makers to implement it.

The model which fulfils all phases of the decision-making process is the one concentrating on development of new solutions. The particular emphasis is put on the conceptualization phase of solution, which ought to be innovative and impossible to be applied by other organizations. This precise process generates the most innovative solutions even though it is relatively expensive to conduct due to the period of time required for its performance, which successively delays the decision implementation time - any excessive delay may impact the effect of the implemented solutions in an adverse way.

## 4. The process of decision making in public medical entities - the survey results

The research of the decision-making process appear to be extremely crucial on the grounds of the aforementioned identification of the process with
management as well as with the significance of effective decision-making for the organization success. The analysis of the decision-making process is one of the elements undertaken by the author of the research, of which the main aim has been to identify the impact of the discussed strategic orientation (the market versus the resource orientation) of the public organization on its efficiency. The first part of the conducted research covered the recognition of strategic orientation of 120 public medical entities and the assessment of their performance. The whole project was carried out with the use of mixed methods and the research was conducted in a sequential manner with quantitative research being dominant (Creswell 2013). First the quantitative research was fulfilled and the results obtained were used to select the organizations for the qualitative research in the following categories:

1. The resource-orientated organizations (2 organizations).
2. The market-orientated organizations (2 organizations).
3. The high-performance organizations (2 organizations).
4. The low-performance organizations (2 organizations).

In order to restore the decision-making process the interview based on a specified pattern was conducted with the director of the unit in each of the organizations. To check the reliability of the events presented by the directors their responses were compared with the ones of an additional person in each of the organizations, who had been indicated as the participant of the strategic decision-making process.

Table 1. Distinction of the surveyed organizations

| Organiza- tion | Strategic organization | Effectiveness | Voivodeship | Number of branches / clinics | Size of the contract | The length of service at the position of the unit director |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | The resource one | - | Mazowieckie | $5 / 4$ | 17 million | 5 |
| 2 | The resource one | - | Śląskie | 16/19 | 88 million | 3 |
| 3 | The market one | - | Pomorskie | $25 / 7$ | 139 million | 7 |
| 4 | The market one | - | Małopolskie | 1 | 3.5 million | 10 |
| 5 | - | High | Kujawskopomorskie | $38 / 22$ | 244 million | 9 |


| 6 | - | High | Dolnośląskie | 12 / 10 | 35 million | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | - | Low | Śląskie | $21 / 23$ | 62 million | 10 |
| 8 | - | Low | Małopolskie | $4 / 1$ | 6,3 million | 3 |

Source: own work

The aim of research within the decision-making area is to recognize the type of such process in accordance with the typology recommended by P. Nutt' as well as the analysis of significant distinctions within the process of making decisions in two categories - between the companies of a different strategic orientation and the ones of a different efficiency level. To achieve the following goal the author is planning to adopt the restoration of a decision-making process. The full anonymity of both the respondent and the organization was guaranteed in the course of the research. The interviews were conducted in the period August - November 2016. The following table represents a brief characteristics of the surveyed organizations.

The director of the largest unit managed the contract worth more than PLN 240 million, while the smallest unit was the hospital where only the long-term care facility operated with the contract worth of PLN 3,5 million.

Table 2 presents the decision-making process phases which have been recognized in a particular organization and the decision-making model which can be assigned to a give organization. Out of the surveyed organizations the four ones displayed the historical process of a decision-making model, thus the one relying either on the previous decisions within the organization or on the ones tested by other organizations. However, the noted some kind of derogation was the emergence of the solution generation phase, which yet was very superficial and came down to reviewing the solutions applied in other organizations - for that reason it has been classified within the historical model of the process since it did not fulfil the significant part of this process. The model of solution generation with all the required phases was implemented by three organizations. However, only one of the organizations carried out the process in accordance with the model of P. Nutt, and in the two remaining ones a shift of the most significant generation phase to the phase of ideas elaboration occurred, which was fundamental for the whole process. One of the organizations applied the decision-making process in compliance with the scheme of the model of available solutions.

It should be pointed out, that 7 out of 8 surveyed organizations represent the model of a decision-taking within which the most significant phase is the ideas elaboration phase. This may be influenced by the fact, that organizations in their activities depended on external funding, which meant that thorough and attainable development of a specified idea increased the feasibility of funding obtainment.

Table 2. Decision-making model in the surveyed organizations (the bolded and darkened cells indicate the most significant phase)

|  |  | PHASES OF A DECISIONMAKING PROCESS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | The consideration of a strategic phase |  |  |  |  |  | MODEL |
| 1 | Activity specialization in the traumatic and orthopaedic as well as in rehabilitation areas | x | x | $\mathbf{x}$ |  | x | The historical model of a decision-taking process (with additional, though superficial conceptualization phase) |
| 2 | Hospital computerization | X | x | x | x | x | The model concentrating on the generation of solutions |
| 3 | Profiling of the oncology centre | x | x | $\mathbf{x}$ | x | x | The model concentrating on the generation of solutions, with the elaboration phase being the most significant one |
| 4 | Loan obtainment for the development of activities | x | x | x |  | x | The historical model of a decision-taking process (with additional, though superficial conceptualization phase) |
| 5 | Construction of a new surgical block and the hospital reorganization | X |  | x | x | x | The model concentrating on the use of available solutions |
| 6 | Opening of the orthopedia and ophthalmology wards | x | x | $\mathbf{x}$ | x | x | The model concentrating on the generation of solutions, with the elaboration phase being the most significant one |


| 7 | Formation of the online <br> reception desk |
| ---: | :--- |
| 8 | Opening of the <br> rehabilitation ward for <br> adult patients |

The process of a decision-making was also analysed with respect to the significant distinctions among organizations of different strategic orientation as well as of distinct efficiency levels. Within the area of strategic orientation no substantial differences were identified in the process of decision-making. However, within the area of distinct efficiency levels of organizations, it could be noted that the organizations presenting the lowest performance display the historical model of a decision-taking process. This model appears to be the most convenient for the managers, however, it may not guarantee the best solution, which would solve the decision issue in the most effective way.
In the course of the interview on the restoration of a decision-making process there were asked additional questions concerning among others the problems in the process of a decision-making as well as a highly significant in public companies the process of engagement of stakeholders (internal and external ones) in the process of decision-making.
The directors indicated the following issues concerning a decision-making process:

- dependence on the founding authority and politicians,
- resistance of employees to changes,
- client - conducting activity in a very sensitive sector, where all decision must be analysed with respect to the "well-being of the patient", which does not always serve the interest of the organization,
- policy, both at the national and local level,
- monopoly of the National Health Fund (NFZ) - one decision of officials and even the best idea may be wasted, especially in the case when the income of the organization depend $100 \%$ on the National Health Fund,
- lack of an integrated system of medical and managerial information in the medical system,
- disregard of the particular scope of services by the system,
- need to reconcile too many interest groups,
- dependence on too many external entities,
- distance and low involvement of employees in the organization's activities,
- financial constraints - too little financial means to ensure freedom of action,
- trade unions, which frequently cause too much confusion and are not open to changes and dialogue.
Simultaneously, the majority of directors did not recognize the need to improve the decision-making process in an organization, leaving it to the individual decision of its employees. Neither did they note the necessity to develop the skills of a decision-making with respect to themselves.

In the area of internal stakeholders (employees) and external ones some part of directors acknowledged that is was practiced by them unwillingly and only in case of a need. Most frequently any actions conducted in relation to stakeholders are limited to them being informed about all decisions made. However, there was a certain tendency observed among the directors - if they do engage any stakeholders the more willing actions are undertaken towards the internal rather than external ones. With regard to the process of employees' involvement the following statements have been expressed:

- "We are trying to engage our employees since they are ultimately the ones who perform our decisions" (Director 3),
- "Yes, because I am not able to everything by myself and I believe that if all employees feel co-responsible for the decision they will perform them better" (Director 6),
- "Yes and no. Some of our employees have such a strong position that they are involved in the process of decision-making and practically they themselves engage in it; however, we do not have a devised procedure on involvement of employees in a decision-making process"(Director 5),
- "We do not get our employees involved, we only inform them about decisions that we made" (Director 1)
- "If it is required by the situation, namely, the decision significantly influences the work then I try to get the employees involved, mainly through the conversation" (Director 2),
- "I do not consider it necessary, it will only hinder the whole process. And in this way I make decisions and only inform about them. If I was to get them involved, we would probably never do anything, because we wouldn't be able to reach an agreement " (Director 7),
- "Definitely not. In this respect, I am a traditionalist - I decide and the workers have to perform my decisions" (Director 8).
Regarding the involvement of external stakeholders, the organizations' activities are limited to informing, and if there is a wider range of cooperation it is rather a necessity, in order to reduce the risk of rejection of the project and the lack of funding.

Main sources of information in the decision-making process: the knowledge and experience of the directors and employees, the data available in the organization, Internet, informal discussions with people from the industry, industry conferences, literature, consulting companies, observation of the market, industry analyses, specialist press, industry portals.

## 5. Conclusion

The conducted research has indicated that the surveyed organizations are dominated by the historic decision-making model, so the directors use mainly solutions verified in other organizations. This approach cannot be completely negated, because it assumes some kind of learning from others, but enriching it with the phase of solution conceptualization could increase the chances of your organization to make the optimal decision. The carried out analyses showed that public medical entities, have a highly developed particularisation phase of the selected solutions, due to financial dependency on the third parties, mainly the founding bodies. Future research of decision- making process should pay attention to ent identification particular methods and tools which are used in the decision-making process especially in the conceptualization phase.

Decisions made in the organization influence its success, because managing is synonymous with deciding. Therefore, the ability to make decisions becomes a key competence of the managers, but also employees. It seems necessary to improve this process in the organization - activities developing the abilities of creative and innovative approach to decision-making among managers, also and perhaps especially in terms of conceptualization of possible solutions of a given decision problem. Improvement of decision-making process should also include broader view on the recruitment process. Organisation should pay more attention to on competence and skills in creative thinking instead only professional qualifications. Recruiting employees outside our branch could also improve our decision-making process because they don't see limitations and probably because of that they are more creative.

## Summary

The decision-making process in public healthcare entities identification of the decision-making process type
The decisions made in the organization determine its success, therefore, conducting studies in the scope of decision-making seems important both for theory and practice. The aim of the
studies was to identify the type of decision-making process in public medical entities with the use of typology developed by P. Nutt. For this purpose we used qualitative methods. Interviews with 8 directors of hospitals were conducted and the reconstruction was made on the basis of the decision-making process, which enabled the assignment of the model of decision-making process to the organization. The research indicated that four organizations use the historical decision-making model, three organizations represent the model of generating solutions, and one organization uses the model of available solutions.

Keywords: decision-making, public organisation, hospital.

## Streszczenie

Proces podejmowania decyzji w publicznych podmiotach leczniczych - identyfikacja typu procesu decyzyjnego
Podejmowane w organizacji decyzje warunkują sukces organizacji, dlatego też podjęcie badań w obszarze procesu podejmowania decyzji wydaje się istotne zarówno dla teorii jaki i praktyki. Celem prowadzonych badań była identyfikacja typu procesu podejmowania decyzji w publicznych podmiotach leczniczych z wykorzystaniem typologii opracowanej przez P. Nutt'a. Do realizacji tego celu wykorzystano metody jakościowe. Przeprowadzono wywiady z 8 dyrektorami szpitali i na ich podstawie dokonano rekonstrukcji procesu decyzyjnego, co pozwoliło przyporządkować organizacji model procesu decyzyjnego. Zrealizowane badania wskazały, iż cztery organizacje realizują historyczny model podejmowania decyzji, trzy organizacje reprezentują model generowania rozwiązań, zaś jedna organizacja model rozwiązań dostępnych od ręki.

## Słowa

kluczowe: proces podejmowania decyzji, organizacja publiczna, szpital.

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