

Positioning RPD in the Decision Making Matrix

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ABSTRACT

Introduction: This paper provides a decision making matrix, a unique classification of the different types of decision theories. Method: Author relied on his own practical experience in the field of emergency management, applied logical reasoning and used graphic representations. Results and discussion: based on future temporal impacts of the decision and the time spent on them, author created a simple decision making matrix, in which 4 fields can be found. Each field contains a distinctive decision type, i.e. *classic, bureaucratic, routine* and *recognition-primed decisions* (RPD).

KEYWORDS

Common ground, modelling, decision matrix, emergency management, RPD

INTRODUCTION

There are many ways to classify decision theories. In many cases researchers used two distinct methods. One of them defines the principles and rules based on which the decision maker has to reach the final result. These methods belong to the so-called normative models. The other method basically focuses on the decision-maker as a thinker and emotionally charged person and the decision-making process itself. Methods in this group are called descriptive models. Naturally there are also other aspects of classification. Different levels of decision making can be found almost in all organizations; namely strategic, operational and tactical levels. Moreover, administrative work of authorities can be viewed as bureaucratic decision. Although emergency managers unfortunately cannot carry out classic decision-making processes in reality due to lack of time, they become acquainted mainly with these types of decision theories during their training. In this "jungle" of decision theories, author as an emergency manager intends to position his practice, where recognition primed decision as a demonstrative part of naturalistic decision making is often used.

DECISION MAKING MATRIX

Decision Types Based on their Temporal Impacts and the Time Spent on Them

To explain and understand the essence of special decision-making mechanisms that emergency managers, e.g. fire fighters often use, author creates a unique *matrix*. In this matrix, author regards the *magnitude of time spent on decisions* and the *temporal impact of decisions, its "weight"* as determining characteristics.

When establishing the matrix, author set the requirement that it must not infringe the regularities of analogical decisions. Nonetheless, it is still able to demonstrate the structure of our decisions in a way different from the traditional ones, so the unique decision-making mechanism in emergencies is highlighted.

Decision from Strategic to Tactical Level

The weight of the decisions of managers, together with the division by the time horizon can be also found in the work of many experts (e.g.: Radford, 1988; Molnar, 2003; Kelly, 2011). In the center of the division, organizations with different structures stand, where "heavy-weight" decisions, i.e. *strategic decisions* are made by *senior managers*, "middle-weight" decisions, i.e. *operational decisions* by mid-level managers, "light-weight" decisions, i.e. *tactical decisions* by low-level managers. The time horizon of decisions means a *long-, mid- and short-term* division. Molnar, in his summary, does not directly link strategic decisions with the long-term time horizon, furthermore, the tactical one with the mid-term one, and the operational one with the short-term one, however, logically, this content is unambiguously implied in the background. In the scope of management and decision theory, this concept can be justified through the works of a multitude of different authors (e.g., Kindler, 1991; Greco, 2005; Bakacsi, 1996), thus author regards it as generally accepted.

With the illustration of the division, *Figure 1* clearly represents the interrelation between and the hierarchy of decisions. Decisions only occupy a part of the fields defined by the coordinate axes, and based on the logic of division, the "empty" parts do not even exist. "Heavy-weight" decisions cannot be made in a short time, and the weight of operational decisions may only be low. This type of division is certainly not so dominant with authors preferring this method, but its inner core clearly points in this direction. The vertical structure of decisions depends on the literature that is used, as in many cases the two lower levels are reversed.

The above approach, in author's opinion, views the decision as an end-product from inside the organization and not as an active link with the partner or the environment. Looking at it from outside, the impact and success of

decisions, in author's opinion, can be completely different. To obtain a license from the authorities it is worth a mere "yes" for the client, while inside an organization, it means much more. However, the strategic decisions of firms on partners can also be regarded as strategic determination.

Classic models are used by the stakeholders of business life to achieve their long-term success, mainly strategic objectives. Strategic objectives obviously have major influence on the long-term activities of actors of business life, so, they can be regarded, based on their future impact, as significant, "heavy-weight" objectives. To do so, decision-makers have enough time, unlike decision-makers in emergencies, for instance firefighters, police officers, etc in actions.

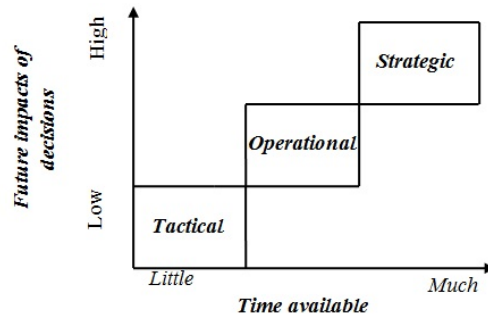


Figure 1 – Relationship between strategic, operational and tactical decisions depending on the time available and the future implications. Source: Author

Simplifying the Decisions

If the significance of the serious impacts of decisions is taken into account, author assumes that there must be, on the contrary, a decision with a "weight", whose impacts are considerably lower. We all practice them daily, regarding them as *routine-like*; based on this, it is named *routine decisions*. Another well-known feature of routine decisions is that not only is their future impact slight, but also we only spend little time to make them; due their automatism, we practically do not even notice them. Despite of this fact, this decision type should not be neglected, since our everyday actions are mainly based on them (Betsch & Haberstroh, 2005; Ribarszki, 1999).

Regarding the interrelation between classic and routine decisions, author ascertains that they are converse as far as their future impacts and the time spent on them are concerned; the former has significant impact and long time, the latter has slight impact and short time. The above are illustrated in a coordinate system in *Figure 2*.

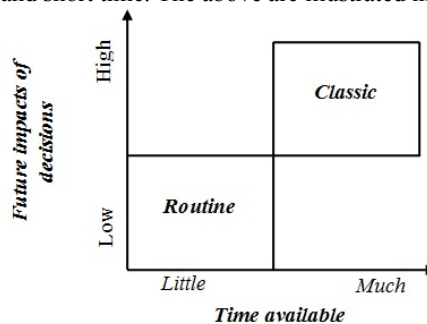


Figure 2 – Relationship between classic and routine decisions depending on the time available and the future implications. Source: Author.

Complementing Empty Fields

Following the above train of thought, logically, the question arises whether the unfilled parts in the coordinate system can be filled, i.e. a relatively low-importance decision paired with long decision-making time and its opposite, significant future impact paired with short decision-making time, from the aspect of decision-making procedures.

Author divided the sides of the matrix, i.e. the axes in the simplest way: in the case of time, *little-much*, in the case of the impacts of decisions, *low-high* values. Thus, the matrix gives four fields (*Figure 3*), to which author uses the following names: *classic*, *bureaucratic*, *routine* and *recognition-primed decisions*. The values of classic and routine decisions, based on the above, have already been defined: in the previous case both values are high, in the latter they are low. The values of the two new fields are contradictory: in the case of bureaucratic decisions, their future impacts are *low*, the time that may be spent on them is *much*. With recognition-primed decision, the situation is opposite: the extent of impact is *high*, the time that may be spent on it is of *little* value.

Thus, the fields of the matrix have been filled, however, it is necessary to review what their content actually means.

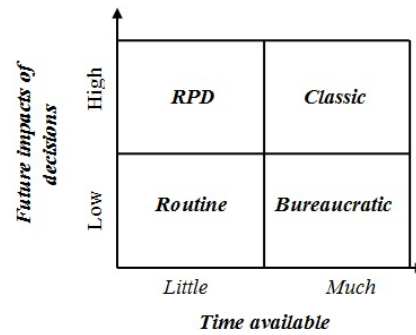


Figure 3 – Decision matrix in relation to the time available and future impacts. Source: author

FEATURES OF THE MATRIX'S FIELDS

Classic Decisions

Researchers of decision theory study this decision-making mechanism in the widest ranges, thus, this field of decision theory is the most wholly described (Belton & Stewart, 2002; Paprika-Zoltay, 2002). The characteristics of the field are that decision-making has “high” values on both axes. The action as a result of the decision has a significant future impact. In order to make this decision, careful considerations are necessary, which can only be done with sufficient time spent on it. It means that from the time of recognizing the problematic situation until specific decisions days, weeks or perhaps months may be available. It facilitates the decision-maker to collect information, analyze it, create options based on the results, to modify and compare them by introducing new conditions, or perhaps completely exclude certain options. Options that may bring the best results for the decision-maker, based on the elaboration of information and conditions available in a given time, will be implemented.

The above steps can, of course, be put in another form. Not specifying this decision field any longer, author concludes that we are dealing with a long-term quest, allowing the development of several variations, to which author uses the name: classic decision-making.

During the operation of law enforcement agencies, including the area of disaster management and the fire service, it is the dominant form of decision-making. Each manager applies it at different levels, obviously for the sake of facilitating and ensuring long-term efficient operation. A chief fire officer, based on previous intervention statistics and depending on the probable future vulnerabilities of the area under his responsibility, makes an effort to replace equipment due to depreciation, to purchase new equipment, to increase the staff or regroup. These efforts, naturally, are often in contradiction to the will of the senior management, primarily not due to professional disagreements, but budget restrictions (Restas, 2011). The latter depends on the country's fiscal situation, the size of the amounts to be spent on fire protection.

Bureaucratic Decisions

It can be observed as a typical decision-making process at a bureaucratic organization like government organizations or different authorities. The field is characterized by the fact that the problem's weight is *low*, while the time spent on a solution represents a *high* value. The operating mechanisms of these organizations are analyzed by sociology, more specifically by organizational sociology. The goal is not to reach an individual solution, taking into account the characteristics of the given problem, but to prepare a template, aligned to the operational mechanism of the organization and easily manageable. Its simplest example can be the forms and questionnaires of authorities.

Not underestimating even by chance the work performed by such an organization, however, author concludes that from the aspect of decisions, the activities of bureaucratic organizations are basically checking for compliance with regulations. Specifically, a comparison of the problem's contents takes place with the provisions of an existing sample (mostly legislation), which usually requires a “yes-no” elementary decision, without variations. The organization usually has restricted time, but at least days to make this decision.

In the field of law enforcement agencies, there are also many examples of the above decision-making mechanism. For instance, fire service as a public authority and a professional authority, manages requests submitted to it according to the national acts on the rules of public administration procedure. In its competence, it compares the issues submitted in the requests (such as the establishment and use of buildings) with the relevant legislation in force, and agrees to the decision (authorizes it) or not. The decision-maker does not change the subject of a request in case of non-compliance, it does not recommend or give advice. The simplistic outcome of their decision is the communication to the applicant of a *yes – no* variation. The above are, of course, very simplified descriptions of the process, and the result is similar during the functioning of any other authority (e.g. police, local government).

Routine Decisions

Small actions of daily life are based on this decision-making mechanism. The field's characteristic is that both values of the factors of the matrix are low. This is exactly what individuals need so that the constantly repeating moments of everyday life do not constitute a decision problem. Many times, it is a subconscious set of activities, whose deeper examination is covered by psychology. Since it is a rerun of identical activities, the brain will automatically give orders to implement it, without committing substantial capacity.

In fact, basic problems are solved here, to which previously there was the same or similar response. So, by recalling, a process that has already occurred will be repeated. As a result of constant repetitions, one of the characteristic features of decision is the effectiveness of automatism, that is, the time spent on decision manifests itself in its minimum requirement.

RPD – Recognition-Primed Decisions

The field is characterized by the fact that decisions of major consequences have to be made in a relatively short time. Classic decision-making mechanism, already discussed, due to the shortage of time is practically useless, in some cases it may be even dangerous (Klein, 1989). The comforting weightlessness of routine decisions, by the very nature of the problem, clearly cannot receive a role. The fact that this is a typical decision-making model, is crystallized as a result of a number of observations. It was observed during a military exercise that commanders made the vast majority of their decisions in less than 1 minute. The number of decisions made in more than five minutes was rather low. During another survey, involving chief fire officers with over 20 years of practice, having studied 450 decisions of a total of 150 experienced decision-makers, they ascertained that 85% of decisions were made within one minute. They drew the consequence that, unlike the analyzing and evaluating thinking, it is a typical decision-making procedure, which they called recognition-primed decision (Klein, 1989). This procedure is the typical decision-making model of professional managers in emergencies, like firefighting (rescue operations) managers, police officer in criminal action, emergency surgery, pilot, etc.

CONCLUSION

Based on author's assumption, the mechanism of decisions can be divided in a way that ensures the equivalence of emergency decision-making to other types of decision making. To justify this hypothesis, author created a decision matrix, in which the future impact of decisions and the time spent on it are taken as a basis; thus, we receive 4 fields. Each field contains a characteristic decision type, i.e. *classic*, *bureaucratic*, *routine* and *recognition-primed decisions*. The significance of the division lies in the fact that, by doing so, the decision mechanism of emergency decision-makers receives an equivalent status to other decision mechanisms. As a result, they shift from the periphery of mechanisms.. This innovative approach combines horizontal and vertical division of theories and blends them in a matrix. It provides a framework, whose primary goal is to shed more light on the decision-making processes of emergency managers within the system of various decision theories. Its significance becomes apparent if we know the trainings of rescue teams include almost entirely classic decision processes. However, the actual situations they face in emergencies often require quick recognition-primed decisions, thus they deserve to be at the core of training of emergency managers.

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