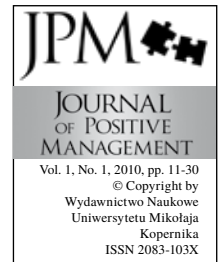


FUNDAMENTAL ISSUES OF RATIONALIZATION IN CORPORATE DECISION-MAKING

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Abstract

The paper deals with the problems of the improvement of the decision-making process that is composed of two sub-systems: preparations for making a decision and taking it. Based on the multi-aspect characteristics of the essence and conditions of the decision-making process a referential model of decision-making has been proposed. The model assumes the existence of two principles that apparently may seem contradictory – the principle of rationality and the principle of creative uniqueness. Decision-making that follows this model increases the opportunities for making adequate decisions and implementing innovative enterprises which contribute to the company's development.

Keywords: decision, decision-making process, rationalization in corporate decision-making

Paper type: Conceptual paper

1. Essence of decision-making

An ideally structured organisation (including an enterprise) is one that has an efficiently functioning system – that means all of whose elements co-contribute to its success (Kotarbiński, 1975, p. 68). If these elements of an enterprise are to co-contribute to its success they need to remain in a dynamic state: employees need to act and apply properly the resources that have been assigned to them. However, if employees' activities and the functioning of resources are to be oriented towards their enterprise's success, firstly, specific objectives and ways of conduct need to be determined. Determining specific objectives and ways of conduct to be realized in enterprises (this refers also to all other institutions) constitutes a core element in the decision-making process. Therefore, decision-making is considered undoubtedly as a key element in management (Gościński, 1977, p. 152). Some authors in order to underline the importance of the above statement use even the following poetical metaphor: 'decision-making is the heart of management' (Mosley et al., 1985, p. 84).

In a theoretical dimension decision-making can be looked upon in two ways: as a result of a choice, or as a process of choosing. Since the ‘quality’ of choice is to a large degree determined by preparation and realization, the emphasis therefore falls on the selection process itself. It is so because the essence of the process is the information on the basis of which knowledge is generated and this information also conditions out of what (from what set of alternatives), on the basis of what (what criteria), and in what way (the selection procedure) the choice is going to be made. Therefore, the choice and the way through which it is achieved are essential for reaching excellence in management. In other words, it should be recognized that from a management perspective, which is understood here as activity whose ultimate purpose is to lead to the managed institution’s (enterprise’s) success, theoretical dilemmas should not contribute to treating the act and the decision-making process separately. The decision-making process should be approached as a whole, as a process of choosing but concluded by reaching a specific result, which means it should end with a specific choice.

It must be noted here that any divergences signalled in the interpretation are, however, of some importance for organisations (Mosley et al., 1985, p. 159). The decision act (the choice) should be (and usually is) ascribed (as a qualification, but also as an obligation and responsibility) to a subject determined in the organizational structure but all the subjects involved in the process leading to a given choice may be described with much ‘elasticity’, or even occur there, in a sense, ‘spontaneously’ on their own initiative¹. The major raw material for both the decision-making process and the decision-making act is always information concerning the desired objectives, conditions, manners and possibilities of reaching them. Therefore, it is good when persons possessing the desired information share it with the organization not only because they are obliged to do so, but because of their authentic need just to co-contribute to their organization’s success.

Having discussed the issue of various approaches to decision-making (the issue that is not the most important in our considerations), we can propose the following definition of decision-making:

Decision-making is an intellectual process of categorizing information into various options of purposes and/or activities that lead to these purposes out of which one option is chosen for realization in a conscious way.

‘A conscious way’ means that the choice is not random and is based on well-thought-through criteria. Decision-making can also be treated as a dynamic system composed of two subsystems: preparing a decision and taking it². The subject

¹ Recently the concept of *empowerment* has become very popular in management. It is based on delegating decision-making authority and on a broadly understood participation of employees in decision-making processes – the author’s comment.

² In a further part of the present work a proposal will be made to extend the ‘decision-making’ system by introducing the third subsystem: ‘implementing a decision’ – the author’s comment.

that takes a decision is referred to as a decision-maker. A single person can be a decision-maker; however, it can also be a whole team. Such issues are governed most frequently by adequate normative acts that define the legal framework for the functioning of an organization. For instance, in registered companies, which are the dominating form of ownership in Poland, in accordance with the Commercial Companies Code, the following can form collective decision-making bodies: the General Assembly of Shareholders (in joint stock companies), the General Meeting (in limited liability companies), the Supervisory Board or the Management Board. One person decision-makers (within their formal authority) are persons on managerial positions (from the board president down to a foreman) and any other employee of the company within the scope of activities undertaken by him/her³.

Regarding decision-making as a system composed of subsystems (in this case these subsystems include preparing a decision and taking a decision) facilitates highlighting the dilemma related to the phenomenon referred to as co-decision-making. The following question needs to be answered now: 'Who is a decision-maker in fact? Is it only the person that is a member of the team authorized to take decisions, or are these also persons that are connected with the decision-supporting works (e.g., creating decision alternatives) but do not participate in the decision-making act. As far as the verbal dimension is concerned, the issue is unimportant; however, when it comes to the formal and substantive aspects it becomes crucial. From a formal point of view, a choice made ought to be connected with the readiness to bear its consequences. Should somebody who has prepared the alternatives to the decision be responsible for its effects? Rather not, but... . Persons that seek alternatives for decisions have factual knowledge helping them to decide from which set the choice is going to be made and, as a matter of fact, though they do not participate in the very act of making a decision, they influence, often decisively, what other persons are going to select. However, it is hard to ascribe formally responsibility to these persons for something that they are not authorized to do. Moreover, such a practice would function as an impediment to the initiative and creativity on the side of employees – so necessary in contemporary institutions – that ought to be manifested just in their participation (supporting) and working out solutions to different problems in decision-making⁴. The only solution, already tried in practice, seems to be narrowing down the term of a 'co-decision maker' to the persons that participate in the very act of making choices (that is in making decisions) and take full responsibility for the outcome. Responsibility of persons that prepare decisions, which is the responsibility for

³ It results from the essence of activity which is 'a free behaviour'; this means that it is selected by the acting subject. (Zieleniewski, 1969, pp. 163-166).

⁴ The question of the problems in decision-making and related terminological inconsistencies will be explained in a further part of the chapter – the author's comment.

the quality of ‘the input’ in generating alternatives for the decision, should be shifted to the criteria applied for employee appraisals. However, we should bear in mind the fact that responsibility as such is not a pejorative concept but is neutral in its character and indicates the cause-effect relations between the person and the results of his/her actions. If the effects are negative, then the person is found guilty, when they are positive, then the person is considered to be the author of the success (Kotarbiński, 1975, pp. 23-32).

2. Basic classification of decisions

The most important element in decision-making, since it functions as an initiating factor for any activity conducted in enterprises, is decisions that determine which of the alternatives for the decision ought to be implemented. Therefore, decision-makers should make it clear to themselves what is ‘the object’ of their efforts, that is what is the nature of the decision that is being made. Very helpful in such situations is a multi-aspect consideration of this ‘object’ which, in fact, boils down to classifying it properly. Decisions can be classified according to various points of view and their adequate criteria. For the purposes of conducting analyses subordinated to improving a given decision, and needless to say that these are decision-makers’ duties, the following criteria seem to be significant:

- importance for the organisation (here: for the enterprise),
- possibility, or lack of it, of applying decision algorithms,
- knowledge of conditions/factors impacting the desired result of the decision and the relations between them and this desired result, and, lastly,
- knowledge and information resources that can be used by the decision-maker when taking a decision.

If we consider **the meaning of decisions**, then three categories of a decision can be distinguished: strategic, tactical, and operational (current)⁵.

Strategic decisions are characterized by the following: they concern an enterprise’s strategic aims and (or) manners of their realization determined synthetically (for an enterprise this means comprehensively); reaching these aims requires involving all of the resources that are available to the enterprise (though to a different degree depending on the subject of the decision), consequently, this involvement is felt by each employee (here: also to a different degree); once a strategic decision is made it is hard to withdraw from it, or at least, cancelling it is very costly (in the sense of the employed resources indispensable for this undertaking); and – which is most essential – a strategic decision indicates (or

⁵ In subject literature it is sometimes explained that this classification is based on the criterion of time horizon. See: *Leksykon zarządzania*, p. 91.

should indicate) the boundaries for choices, which means they define a free area to be filled by tactical decisions.

Tactical decisions concern tactical aims and ways of reaching them; they refer to the resources connected with (located in) specific links in the chain of values, or (looking at it from a different perspective) to the resources that are indispensable in the realization of specific functions of the enterprise; they are felt by employees of organizational units and/or teams working within specific links and/or within specific functions; their time horizon is usually yearly, which means that they are incorporated in yearly plans; and – most importantly – they should be confined within the boundaries determined by strategic decisions. This is manifested in the fact that their ‘usefulness’ for the realization of the strategy constitutes a selection criterion for the decision alternatives. Tactical decisions define boundaries for operational decisions.

Operational (current) decisions concern current aims and activities that lead to reaching them, they are ‘ascribed’ – in the sense of linking resources and how they are felt by employees – to specific job positions. If operational decisions are considered in a hierarchical dimension, similar to the case of the relation between tactical and strategic decisions, they should be confined within the boundaries defined by superior decisions, i.e., tactical, which means that the usefulness, as seen from the perspective of tactical aims, is (should be) a selection criterion for alternatives for operational decisions. Quite frequently these are so-called ‘non-managerial’ decisions when decision-makers themselves realize what type of action is needed and the type of action is in fact determined by these decisions⁶.

From the relations between decisions classified by the criterion ‘importance for the organisation’ follow very important references for managing. Firstly, the adequacy and ‘excellence’ of current decisions, which, as a matter of fact, are the only ones that stimulate activity actually undertaken by labour, depend on the preciseness of tactical decisions (since they determine the free area and selection criteria for operational decisions), and, in turn, for analogical reasons, the preciseness of these (tactical) decisions depends on the preciseness and excellence of strategic decisions. Secondly (this point results from the previous point made), the subject of operational decisions should be anticipated by the subject of tactical decisions the subject of which, in turn, should be anticipated by strategic decisions. Thirdly (this point results from the previous two points made), strategic decisions should precede and be made prior to tactical ones, and these, in turn, should be made prior to operational decisions. Fourthly, strategic decisions as ones that determine the adequacy of lower class decisions ought to be taken with due diligence and with consideration of all predicted consequences

⁶ Sometimes non-managerial decisions are differentiated from operational ones by calling them “executive” decisions (Kuc, 1999, p. 112).

within the scope of an enterprise's tactics and operations. In order to ascertain this due diligence they should remain subject to all the methodological principles of rationalization⁷. In practice, strategic decisions are most frequently made at the top management level, which means (with the exceptions of micro and small businesses that are managed by the owner) that the decision-making body is composed of several members (the General Assembly of Owners/Shareholders, the Supervisory Board, the Management Board).

Decision-making algorithm is a procedure for taking decisions based on the experience resulting from multiple repetitions of certain decision-making situations. Therefore, there is no need to reconsider *from the beginning* every repeated case that requires making a decision; in the majority of cases decisions are taken in a routine way. Such decisions were named by the Nobel Prize winner – Herbert A. Simon – as 'programmable'. At present, numerous decisions are programmable in the literal meaning – computer programmes are used to prepare and make decisions. To devise such computer programmes, however, it is necessary to recognize first some regularities concerning the events or phenomena on which a given decision is going to be made. If decisions refer to new issues, totally unexplored so far, or, explored but to the extent that does not allow identification of any regularity 'governing' these issues, then the decision-maker cannot be in the possession of any useful procedures. Deciding in such a situation is a *sui generis* experiment, a kind of activity that in this situation is pioneering and original, and functions as 'a prototype'. Decisions made under such circumstances are referred to as non-programmable (Simon, 1982, pp. 72-97). If we have a close look at decision processes applied in management at the beginning of the twenty-first century, we are able to prove the thesis that a significant part of decisions made – despite the dynamic development of information systems in management support⁸ – has a non-programmable character. This concerns almost 100% of strategic decisions and the majority of tactical decisions made. Only in the scope of operational decisions – in order to find an adequate solution – is it enough, in many cases, to base decision-making on a previously defined procedure (programme)⁹.

⁷ This is about following the principles of methodological rationalization, which, according to Tadeusz Kotarbiński, can be defined as '...conduct of a person (here: of a decision-maker – M. J. S.) directed by the possessed knowledge, and this possessed knowledge can be explained as all the possessed information which, due to the manner in which it was justified, should be ascribed, by the person, probability sufficient enough to behave as if it was true.' (Kotarbiński, pp. 123-124).

⁸ By these systems I mean various management information systems, as, for instance, new generations of MRP, ERP, expert systems, 'artificial intelligence', etc. – the author's comment.

⁹ It is so because enterprises operate under turbulent surroundings and the level of turbulence, as a result of globalization, has been on the increase. Problems that constitute the subject of a decision are not only unknown but previously were 'unimaginable' at all – the author's comment.

Based on the third of the distinguished criteria, **knowledge of conditions/factors impacting the desired result of the decision and the relations between them and this desired result**, we can identify decisions that are taken under the circumstances that can be referred to as the conditions of certainty, risk, and uncertainty (Gościński, 1977, p. 161).

Decision-making under the conditions of certainty, as the name implies, concerns such situations about which we possess comprehensive knowledge, in particular, on the cause-effect relations occurring in them. Under such conditions, in order to achieve a desired outcome (that means a desired effect) it is necessary to trigger off specific actions that have the character of the cause of this effect. In other words, it is known what should be done to achieve ‘for sure’ a given desired effect. Decisions of this type concern merely (from the perspective of decision-makers – unfortunately) phenomena that have already been identified, researched scientifically and described in the form of some regularities, or the knowledge on them has been generated out of experience. In business practice decisions that are being discussed are usually limited to the problems of technology, or to routine and procedural tasks of a programmable character.

Decision-making under risk is characterised by the capability of determining the statistical probability of the occurrence of specific results (effects), providing specific factors (causes) are triggered off. It happens so when the phenomena remaining in the scope of this decision have already occurred, and when there are available adequate data to be used in evaluation processes of predicted consequences of given events. Usually, decisions that concern things in the case of which the cause factor is a human are risky¹⁰. A human being, by nature, has been gifted with a freedom to decide on his behaviours and can be, at most, more or less ‘predictable’, but he always leaves a certain risk margin that his behaviour will be different from what was expected.

Decision-making under the conditions of uncertainty is characterised not only by lack of certain knowledge (here: total lack of knowledge) about factors/conditions impacting the desired result of the decision, but also by the impossibility of establishing a statistical probability in the scope of the cause-effect relations. This impossibility stems from the fact that the phenomena being the subject of the decision remain unidentified, or sometimes are unknown at all, have not been recorded so far, and there are no data in relation to which a calculus of probability could be applied. At present, most strategic decisions in enterprises (and also in many other types of organizations) are taken under such circumstances.

The criterion of **knowledge and information resources** that can be used by a decision-maker in a decision process allows two types of decisions to be

¹⁰ Risky because there exists a statistically identified risk of incorrectness that follows from the relation: *Risk of occurrence = 1 – probability of occurrence* – the author’s comment.

distinguished: optimized and non-optimized¹¹. This classification, though very general in its character, is satisfactory to explain the essence of the issue discussed.

Deciding was defined above as an intellectual process of categorizing information into decision alternatives out of which a choice is made. This process is started with a decision-maker's becoming aware of the need to decide and is finished with making a decision. If the decision-maker that is involved in this process uses the same amount of information and knowledge which he possessed at the initial stage of the process, so he does not acquire and consider new information, then we deal with a case of a non-optimized decision. A decision is referred to as non-optimised if the decision-maker all the time possessed but did not change the information base, no matter whether this base was sufficient to make a correct decision or not¹². However, if the decision-maker enlarged his information base and during the decision act had a larger amount of information and knowledge at his disposal than at the initial stage of the process, then such a decision can be named as optimized.

In spite of appearances the question of classifying decisions based on the discussed criterion of knowledge and information used is not as obvious as the semantic meanings of the names of the distinguished categories seem to imply: optimized and non-optimized decisions. This results from the reasons for which a decision-maker relied on the information base, either enlarged or unchanged, at the moment when he realized the need to commence a decision process. If we neglect situations that result from improper assignment of decision authority and/or improper manning of positions authorized to make decisions and situations concerning programmable decisions, when the information base created for decisions that are to be taken for the first time on a specific matter is sufficient to be used again in a routine way in the future, when the subject of decision remains relatively unchanged, a decision maker does not enlarge his information base not because of his intellectual laziness, incompetence in the subject of decision, absent-mindedness, or any other reason showing his unscrupulous approach to decision-making, but because of lack of time to fill the information gap. The

¹¹ The formulation of this criterion has been inspired by M. Mazur's concept that was created already a couple of decades ago (Mazur 1966, pp. 74-95.), and evaluated critically in the works of J. Zieleniewski (Zieleniewski 1969, pp. 485-486) – the author's comment.

¹² It must be stressed that while discussing the criterion the issue at stake is optimising a process, and not optimisation of its result, that is the decision itself which, theoretically, can be optimal even without optimizing the process, for example, when the decision-maker has sufficient knowledge at the very beginning of the process. In practice, such situations concern rather operational decisions, rarely tactical, and almost never strategic ones. As was indicated earlier, for taking correct (the best possible) decisions in an enterprise it is necessary to take correct strategic decisions, therefore, in the present considerations we cannot omit possible cases of lack of information in a decision-making process – the author's comment.

reason is the fact that the moment when a decision is taken (the decision act) is a date for a decision-maker, that is to say that it is independent of him and results from the character of the subject of decision which cannot be controlled by this decision-maker¹³. If a decision-maker does not make a decision *at* or *before* a given moment, then '*something*' will happen that will be out of his control, he will lose a possibility of influencing this '*something*' to his benefit¹⁴. If the cause of the information gap that forms a basis for non-optimised decisions is the lack of time necessary to fill this gap, then, logically, a way to eliminate this cause seems to be getting more time. This cannot be achieved, however, by delaying the moment of taking a decision without bearing consequences, even serious ones. To avoid taking these consequences, it is necessary to gain time through an earlier commencement of a decision process, in more precise terms, through an earlier commencement of a decision preparation stage. The condition for such a move is realizing the subject of a decision early enough. Therefore, in order to explain the possibilities of rationalizing decisions, the cardinal condition of which is their optimisation, we should analyse more profoundly the phenomenon referred to herein as 'the subject of a decision'.

3. Subjects in decision-making

The subject in decision-making is a problem which should be solved in effect of the implementation of the decision made. A problem for an entity (whether it be an enterprise, organizational unit, or individual employees) is everything that impacts the functioning/acting of this entity and conforms to certain conditions, out of which three have a constituting character. If something (an object, a thing, a state of affairs, a situation, circumstances, an event, etc.) is to be classified as a decision problem it has to (Stankiewicz, 1988, p. 16):

- (1) be threatening the entity or providing it with a new chance (opportunity),
- (2) be using specific knowledge or information in an original way with a view to removing the threat or ending the opportunity (Beer, 1966, p. 15),
- (3) have a possibility of choosing a solution for solving the problem, there should be at least two ways of handling the problem.

If this '*something*' is neither a threat nor a chance, or it is one of them but may be handled immediately, and knowledge or information is not used in a unique way, or there is only one solution to the problem or only one way to end

¹³ The subject of a decision results from a mixture of situations uncontrolled by the decision-maker such as the state and/or composition of the elements in the surroundings or normative decisions that something needs to be done in proper time (most frequently by proper dates, e.g., pay tax – the author's comment.

¹⁴ This '*something*' is the consequence of the problem that cannot be solved at the moment by the decision-maker since he did not make any decision in that respect previously. Read more about decision problems in the next point of the chapter – the author's comment.

the opportunity, then we cannot say that a problem exists and, moreover, that a decision problem has come into being (Mikołajczyk, 1981, p. 22; Miller and Starr, 1971, pp. 426-427; Pietrasiński, 1983, p. 14).

At this stage we should scrutinize more precisely the first of the listed conditions indispensable for the appearance of a problem: **'something'** has to be emitting a threat or an opportunity. Some authors distinguish ending an opportunity from solving problems which they equate with the elimination or neutralization of negative situations (threats) (Mosley et al., 1985, pp. 81-89; Stoner and Wankel, 1992, p. 121; Czermiński and Czapiewski, 1995, pp. 18-20). Sometimes, we may come across opinions that are based on P. F. Drucker's views, according to which the role of managers is to search for and make use of opportunities and not to solve problems. It seems that some misunderstanding must have taken place here. Generally speaking, the subject of a decision is 'something' that may impact the functioning/acting of some entity (for instance, of an enterprise), but whether it has a negative impact, constitutes a threat, or it has a positive impact, constitutes an opportunity, depends on various conditions. The same 'something' can be read as a threat by one entity and as an opportunity by another. Moreover, for the same entity it can be a threat in a certain period and in a later period it can transform into an opportunity and vice-versa. For example, the production capacity that is not used fully by an enterprise in the situation when the demand for the enterprise's product – if entirely met – constitutes a threat for the enterprise's profitability. But, in the situation of a sudden increase in the demand or of temporary unpredicted difficulties with supplies on the side of competitors, the ability to make quick use of the excess production capacity by the enterprise may turn into an exceptional chance to increase its sales volume and market share. Another example refers to a recent situation on the Polish market: the zloty's appreciation constitutes an opportunity for importers and a threat for exporters, and quite the opposite, the zloty's depreciation will make a threat for importers and will be an opportunity for exporters. Even if something is perceived generally as a threat or an opportunity, some specific entities can approach it conversely. To illustrate this point let us provide another example. The global economic recession that started in 2008 is treated generally as a threat and may be (and is) an unusual opportunity for entities that possess large capital reserves cumulated as a result of a cautious investment policy (e.g., investing in so-called low-risk securities) that can now be employed for bargain purchases of assets and even for takeovers. We could keep on enumerating examples; however, the conclusion will remain the same: the circumstances, situation, condition, that is the 'something' that becomes the subject of a decision constitutes either a threat or an opportunity, depending on in what period, by whom, and how it will be recognized and approached.

To explain the above-mentioned conclusion, it is necessary to classify decision-making problems according to the three criteria that are crucial in rationalizing decisions, and these are as follows:

- (1) Impact of time on selecting a correct alternative for solving the problem,
- (2) The current state of the problem,
- (3) The purpose of solving the problem.

Comment 1. According to the criterion of the impact of time on selecting a correct alternative for solving the problem, we can distinguish the following three model types of problems:

- neutral problems, a characteristic thing is that the passage of time in a certain period does not impact significantly the selection of a correct alternative for solving the problem;
- urgent problems, with the passage of time selecting a correct alternative for solving the problem becomes more and more difficult;
- unexpected problems, the chances for selecting a correct alternative for solving the problem increase dramatically together with the passage of time.

Comment 2. According to the criterion of the current state of the problem, we can distinguish the following two model groups of problems:

- implicit problems, these are problems not yet experienced by the entity, they are at the stage of emerging;
- explicit problems, these are problems that already constitute real threats or opportunities.

A straightforward comparison of problems against the two criteria fosters an apparent analogy between the neutral group of problems and the implicit problems, and between the groups of urgent and unexpected problems and the explicit problems. However, this would be an unreasonable simplification if the analogies came down to a complete co-occurrence of the considered problems. We can envisage many situations in which problems are still implicit but have already been categorized as urgent.

Comment 3. The number of specific purposes for which problems are solved may be indefinite. However, any conceivable purpose may be categorized based on the consideration of the reason for which a problem has occurred. As a matter of fact, the *silva rerum* of the causes of decision-making problems can be ascribed to three groups that stimulate in the subject of a decision the pressure to solve a given problem. The first group are the situations linked to disturbances in the realization of a task. These disturbances, either already experienced by the entity, or only predicted for the time being, evoke a need to eliminate the disturbances or avoid them, which means recovering or maintaining the initial state. Disturbances cause a deviation from the state that is considered as desired and the recovery/maintenance of which requires eliminating/avoiding this deviation. This type of

problems whose concrete solutions are implemented with a view to eliminating or avoiding a deviation are called deviation problems.

The second group of causes stems from the situation in which an entity can see a possibility for correcting or improving something, or increasing the overall level of performance, and this possibility stimulates taking action with a view to ending this opportunity. Improving something that already exists can be generally referred to as modernization, hence the problems solved to define and/or implement some modernization are called modernization problems.

Lastly, the third group of causes of the occurrence of problems is a need to implement innovation. The purpose of applying a solution is innovation and the problems that are connected with it, or lead to it, take the name of innovation problems.

Having become familiarized with the presented classification of decision problems, we can attempt to formulate cardinal principles of optimizing a decision that is understood here as endeavours taken to generate and implement a problem solution that is the most favourable for the decision-maker¹⁵. These rules include the following:

- it is necessary to search for even weak signals of emerging problems;
- preparation of alternative solutions to the problem should be commenced when they are at the stage of incubation;
- preparation of alternative solutions to the problem should be devised (created) before the time passage limits the chances for selecting the best variants, i.e., when problems are neutral;
- it is always necessary to search for innovative solutions since it is innovations that create the best chances for success, for strengthening the competitive position, and, in effect, for developing and an enterprise's long-term existence on the market (Stankiewicz, 2005, pp. 218-224).

The listed principles constitute a starting point for building a decision model that could be recommended to decision-makers involved in strategic decision-making, which means for the most important decision-makers in enterprises who depict directions, set selection criteria and boundaries to be employed for tactical and operational decisions.

4. Model of a decision-making process

In subject literature we may come across numerous proposals of modelling a decision-making process (Drucker, 1994, pp. 376-394; Griffin, 1998, p. 291; Webber, 1984, p. 212). Many of these proposals aspire to be perceived as the

¹⁵ Our understanding of optimization has been deliberately simplified, which does not change the fact that the essence of optimising undertakings is always reaching the most beneficial effects (solutions) for the party realising the optimisation – the author's comment.

ones rationalizing the process. However, in this case rationality is understood quite broadly – as comprehensive use of knowledge on the essence of the subject of a decision and methodology of achieving the best possible decision results, and not only as limiting ourselves to the knowledge already checked and avoiding our resorting to imagination¹⁶. There can be noticed a considerably large coherence concerning the general structure of this model. Most frequently, the structure is a result of an additive combination of a classical scheme of a system analysis¹⁷ and an equally classical cycle of solving problems. A general structure (a ‘rough’ scheme) of the process is, however, due to its general character, a recommendation of little usefulness in decision-making. Therefore, it requires an operationalising specification, i.e., breaking down the decision-making process into phases, and phases, in turn, into stages including homogeneous, or at least coherent, intellectual undertakings. Ultimately, the already operationalised proposal of the model of the decision-making process can be presented graphically (as shown in Figure 1) assuring, to the largest possible degree, its concurrent rationalization and creativity.

During phase I weak signals emitted by emerging problems should be detected. With this end in view, stage I/1 should be characterized by a continuous and systematic penetration of an enterprise’s situation. Any activity related to this penetration ought to constitute a permanent and integral element of all employees’ duties incorporated in job descriptions pertinent to occupied positions. Besides, ‘exploring’ both the surrounding of an institution and its internal situation (the level of resources) should be conducted with the use of suitable diagnostic methods¹⁸ by organizational units (e.g., a unit for strategic analyses) specially established for this purpose. At this stage forecasts should also be made of the future surroundings and the internal situation to provide informational materials for various methods of strategic analyses. The result obtained in stage I/1 would be the information enabling the realization of stage I/2, that means perceiving a situation being a sign of certain future problems, specific symptoms of emerging problems and establishing likely opportunities and/or threats resulting from the forecasts. The effects of stage I/2 should become the subject of a profound analysis

¹⁶ The authors of *Strategy Synthesis* – a very popular work in the field of strategic management, Bob de Wit and Ron Meyer, appear to question the possibility of joining rational reasoning with creative reasoning during the process of strategy creation – in my opinion, and this is what I am trying to prove, their doubts seem to be exaggerated and result from too ‘orthodox’ (unilateral) understanding of rationality (de Wit and Meyer 1998, pp. 49-78).

¹⁷ A general scheme of a system analysis consists of 5 elements: problem formulation, finding, devising and selecting of solution variants, forecasting the state of surroundings, building models and their applying to predict the effects of specific variants, comparing results and ordering variants (Findeisen and Quade 1985, pp. 86-137).

¹⁸ For example, methods of identification of deviations from the regular state, various – previously defined – critical points in an enterprise’s surroundings and inside it (Wawrzyniak 1976).

whose major purpose should be recognizing the essence, character and potential consequences of the perceived/forecast problem-related situation and this should be diagnosed further in stage I/3. The phase is ended by stage I/4 during which the formulation of the problem should be realized. It consists in formulating precisely a question (questions) the answer(s) to which should be provided in the further phases of the decision-making process. The point is that the problem should be understood as a certain need (no matter what it is caused by) and formulated in the form of a question about what ought to be done to satisfy it. Formulating a problem should be performed on the positions or level of the organizational hierarchy that have access to relatively complete information on what makes the heart of the problem. In practice, these will be entities engaged in the realization of the activity contained in the stage of problem recognition. The formulated problems are ‘moved’ (i.e., are realized) to phase II. All the tasks of the phase are carried out by the decision-maker. In the case of the problems that remain the subject of operational decisions as well as of many tactical decisions, the decision-maker may be (and in practice is) the director of all the phases and stages in the decision-making process. However, things look different when it comes down to strategic decisions. In this case the decision-maker may ‘take action’ only in phase II, since in a well-organized enterprise the activities ascribed to phase I are performed by the relevant organizational units (most frequently by the management board), and the decision-maker, by definition, does not deal with current affairs which include continuous searching for problems (*‘in statu nascend’*), which is the essence of phase I. It is the decision-maker’s role to consider the formulated problem. In the case of the considered strategic decisions the decision-maker studies the reports sent from the relevant units/positions that were engaged in the recognition and formulation of the problem. At this moment the actual process of solving the problem is started – the decision is being prepared. The decision-maker determines the purposes of the solution and – he may do it, but does not have to – specifies the conditions under which these purposes are to be achieved. The purpose of the solution is what, according to the decision-maker, should result from the implementation; for instance, increasing the company’s market share by 10% and gaining access to a specific market of supplies (or a market for selling goods), creating a new way (a new offer) of satisfying some need that will be creating demand, becoming independent of some players on the market (such as suppliers or parties controlling distribution channels), etc. The purpose of the solution may be supplemented by determining marginal conditions, i.e., specifying within what limits searching for alternative solutions should be conducted¹⁹. The purpose of the solution constitutes a certain desired state or a manner of achieving

¹⁹ The importance of the conditions for marginal decisions is emphasised by, among others, P. F. Drucker (1994, p. 147)

this desired state. The state and/or the manner of achieving it, in accordance with the principle mentioned in the previous point, should be of a unique character and innovative because only then does it give the enterprise a chance to gain an advantageous competitive position in a highly competitive surrounding. As is well known, an advantageous competitive position is one of the cardinal conditions for an organization's (enterprise's) development and staying on the market. An important task for a decision-maker within phase II of the decision-making problem realized by him is assembling a working team that will be responsible for preparing alternative solutions. The technique of assembling such a team may vary depending on the nature of the decision problem, the expected solution, qualifications of the staff who is employed by the enterprise. Therefore, a team may be composed of the enterprise's employees exclusively, a mixture of employees and external specialists, and of an entire group of external specialists, then the solution to the problem is delegated to an institution competent in the field relevant to the problem in question (a university, a consulting firm, a research institute, an agency, etc.).

Phases III and IV of the process are realized by the team assembled specially for this purpose. In the case of the processes of solving problems being the subject of strategic decisions, when an innovative solution is to be found, it should be a rule that the decision-maker is not involved in these two phases (III and IV). The point is that the decision-maker, as a rule the management board or a top manager (the president, managing director), should not make team members feel uncomfortable because of his/their presence and in this way disturb them in their creative work. Creativity calls for being imaginative, or even fantasizing while looking for and creating unique ideas to be implemented in solving problems. The presence of the decision-maker(s) and at the same time the superior(s) could put a kind of 'corset' on the 'correctness of thinking', consistency of ideas with the accepted knowledge (particularly by the decision-maker), and limit the courage to externalize non-schematic, fantastic ideas and, in this way, could hinder inventing something exceptional and really new (Stankiewicz, 1988, p. 204). This is why the role of the decision-maker in phases III and IV should be restricted to the extent which does not limit optimal working conditions (budget, rooms, research equipment and tools, access to databases, not over-burdening team members with workload, and so on).

Realization of phase III is connected with generating a maximum possible number of solution alternatives²⁰. Solutions are expected to be unique and innovative so the proceeding structure of phase III should be adjusted to the

²⁰ Obviously this number depends on the character of the problem, time and budget assigned to the team, etc. However, the point is that we should not introduce a limitation to 2-3 alternatives because if we do so then the probability of having an optimal solution among them is rather low – the author's comment.

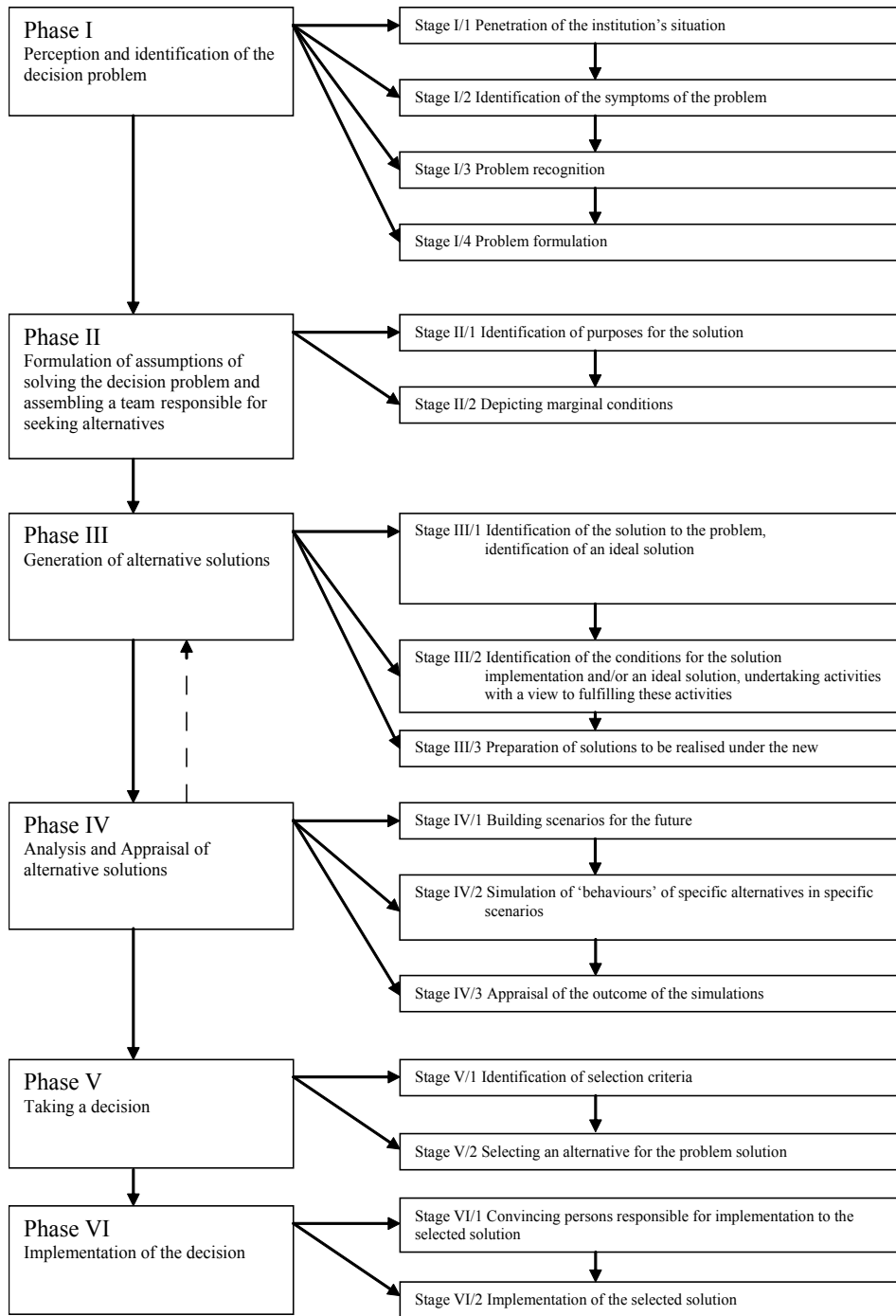


Figure 1.
Model of a decision-
making process

principles of creative thinking (Stankiewicz, 1988, pp. 77-85). According to these principles, what we need to do first is to conceive an ideal solution or an idea leading to such a solution (stage III/1), and then find out why it is impossible in practice to reach this ideal. This is how barriers to be overcome on the way to the concept of feasible solutions are identified. Breaking such barriers may require finding or creating new conditions, obtaining new resources (new knowledge, materials, organizational solutions, etc.) the achievement of which will have to be preceded by dealing with numerous minor problems that constitute *sui generis* problems within the confines of the solution to the main problem (stage III/2). Only on the basis of new conditions and/or new resources can new proposals of solutions be formulated (stage III/3)²¹. In all the stages of phase III use of creative thinking is not only recommended but it is strongly demanded (Liedtka 2002) as is the necessity of applying the related methods of creative (inventive) thinking (Proctor 2002; Sloane 2005).

The solution concepts generated as a result of intellectual and project related works should become the subject of a suitable analysis and appraisal (phase IV). This phase is also composed of three stages. What needs to be done firstly is the preparation of scenarios of the conditions under which the solutions to the problem will be functioning. The form of scenarios has to be adapted to the form in which the solutions to the problem are presented²² (stage IV/1). Then, each scenario is tested by means of solution models and the ‘reactions’ of each scenario undergo simulations in order to check how they change and react to different parameters (stage IV/2). A mention should be made that a wide variety of computer simulation programmes are used during the realization of the stage. The outcome of the simulations allows the figuring out of whether, how, and to what extent specific solutions to the decision problem fulfil decision-makers’ expectations expressed by them in the purpose(s) and marginal conditions (stage IV/3). If it happens so that the generated set of solutions is unsatisfactory, then we should go back to phase III and start from the beginning the activities pertinent to it, this time, however, based on new ideas. If eventually a set of alternatives portends well and includes some ideas that will certainly satisfy the decision-maker, then the solutions worked out together with suitable reports presenting the results of phase IV will be handed out to the decision-maker; now phase V is about to start – this is the decision act.

²¹ This kind of procedure of departing from limitation on the way of implementing unique solutions was proposed thirty years ago by Gerald Nadler (Nadler 1979).

²² A physical or laboratory model, or a prototype can serve as examples of solving a problem. Then the scenario is created out of the laboratory/trial physical conditions. The solution to the problem is provided as a model expressed by signs (e.g., mathematical, logical, graphical, descriptive/verbal modelling) – scenarios concerning the future are represented by means of adequate signs: e.g., mathematical, logical, graphical, or descriptive models – the author’s comment.

We can see that in this phase the decision-maker responsible for strategic decision appears again (previously he/she appeared during the realization of phase II). Firstly, having analyzed the alternatives and evaluation reports, the decision-maker determines the criteria for making an ultimate choice (stage V/1)²³. Then, based on the selected criteria the decision-maker chooses one alternative (takes a decision) which he/she finds suitable for solving the problem (stage V/2). This stage concludes the process of solving the problem but it should not conclude the entire decision process. A final confirmation of the correctness of the decision made can be merely the effects of its implementation. Hence the model approach to rationalizing a decision process includes phase VI – implementation of the decision made. The phase is composed of two stages. The first consists in convincing persons that will be implementing the decision that it is correct and gaining their acceptance of the decision. However, we should bear in mind the fact that a decision is expected to be innovative and, consequently, to introduce changes that will change the status quo significantly. Such changes are supposed to evoke resistance which is quite understandable²⁴. Therefore, in such a situation, it is necessary, first of all, to convince employees to the planned changes and managers should act in accordance with all principles taught within management studies concerning the change implementation process²⁵. It is mainly up to them how much of the idea will be practically realized. As long as the solution is not accepted by the employees responsible for its implementation, its introduction is likely to be Sisyphean labour. Only when the persons responsible for the future implementation resulting from the decision taken accept this task, can we move on to the last stage of the decision-making process: implementation of the decision made (stage VI/2). When realizing this stage it is necessary, in accordance with the change management principles, to introduce into practice the new decision and ‘freeze’ the new state of affairs by means of adequate formal solutions (such as, motivation, control and measurement systems, procedures, etc.). If the implemented decision results in solving the problem (taking the opportunity, avoiding or smoothing out the threat) in the assumed way, then it can be stated that the decision-making process was carried out correctly and eventually will be proved by its rationality. If, on the other hand, the decision does not lead to

²³ It can be assumed that the main criterion will remain the degree of the realization of the purpose that was set for the solutions sought (stage II/1); however, if the solutions generated for the problem in phase III are really innovative it may be necessary to appraise the alternatives based on totally new criteria undiscovered so far by the decision-maker – the author’s comment.

²⁴ Every change in the activity hitherto faces some degree of resistance resulting from the regularities discovered by Karol Adamiecki and named as *inercja przyzwyczajęń* (habitual inertia) and *przekora ludzi* (human contrariness) (Adamiecki 1985, p. 308).

²⁵ In subject literature on management the problems are discussed within the group of topics under the common name ‘Change management’ (Krawiec 2007) – the author’s comment.

the desired effect, then the decision-making process, even though its procedure was consistent with all the assumptions of the model, cannot be treated as fully rational. Such situations are often experienced by decision-makers in practice. What conclusion can we draw here? For sure, not that we should give up our efforts to rationalize and end up on accidental solutions only, but we should learn continuously to make subsequent decision-processes less inadequate and make them closer to what, in its idealized form, is called the rational decision-making process, that is the type of process which is realized in accordance with the principles of the methodological rationality and results in the selection and implementation of the best possible alternative for the decision problem. Although such a process constitutes, in fact, only a hypothetical situation, in practice all decision-makers should endeavour to reach this objective, particularly nowadays – in the epoch of globalization and hyper-competitive markets²⁶.

References

- Adamiecki K. (1985), *O nauce organizacji. Wybór pism*, edition II, TNOiK, PWE, Warszawa.
- Beer S. (1966), *Cybernetyka a zarządzanie*, PWN, Warszawa.
- Czermiński A., Czapiewski M. (1995), *Organizacja procesów decyzyjnych*, Wydawnictwa UG, Gdańsk.
- Dewey J. (1910), *How We Think*, New York.
- Drucker P. F. (1994), *Menedżer skuteczny*, Nowoczesność – AE w Krakowie – Czytelnik, Kraków.
- Drucker P. F. (1994), *Praktyka zarządzania*, Nowoczesność – AE w Krakowie – Czytelnik, Kraków.
- Findeisen W., Quade E. S. (1985), „Metodologia analizy systemowej”, in: *Analiza systemowa – podstawy i metodologia*, PWN, Warszawa.
- Gościński J. (1977), *Zarys teorii sterowania ekonomicznego*, PWN, Warsaw.
- Griffin Ricky W. (1998), *Podstawy Zarządzania Organizacjami*, Wydawnictwo Naukowe PWN, Warszawa.
- Kotarbiński T. (1975), *Traktat o dobrej robocie*, Zakład Narodowy Imienia Ossolińskich – Wydawnictwo, Wrocław.
- Krawiec F. (2007), *Zasadnicza zmiana drogą do sukcesu przedsiębiorstwa XXI wieku*, Difin, Warsaw.
- Kuc B. R. (1999), *Zarządzanie doskonałe*, Wyd. „Oskar-Master of Biznes”, Warszawa.
- Leksykon zarządzania* (2004), Difin, Warszawa.
- Liedtka J. (2000), “In Defence of Strategy as Design”, *California Management Review*, Vol. 42, No. 3.
- Mazur M. (1966), *Cybernetyczna teoria układów samodzielnych*, PWN, Warszawa.

²⁶ The process of approaching decision-making perfection, which is connected with taking and implementing the best decisions in given circumstances, is proof of the capacity of organisational learning, and testifies to the intelligence of the organisation and its capacity for development and existence in the long term – author’s comment.

- Mikołajczyk Z. (1981), *Techniki organizatorskie*, PWN, Warszawa.
- Miller D.W., Starr M. K. (1971), *Praktyka i teoria decyzji*, PWE, Warszawa.
- Mosley D. C., Megginson L. C., Pietri P. H. (1985), *Supervisory Management. The Art of Working with and Through People*, South-Western Publishing Co., Cincinnati, Ohio.
- Nadler G. (1979), „Projektowanie procesów pracy”, *Prakseologia*, No. 2.
- Pietrasieński Z. (1983), *Atakowanie problemów*, PWN, Warszawa.
- Proctor (2002), *Twórcze rozwiązywanie problemów. Podręcznik dla menedżerów*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk.
- Simon H.A. (1982), *Podejmowanie decyzji kierowniczych. Nowe nurty*, PWE, Warszawa.
- Sloane P. (2005), *Twórcze myślenie w zarządzaniu*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk.
- Stankiewicz M.J. (2005), *Konkurencyjność przedsiębiorstwa. Budowanie konkurencyjności przedsiębiorstwa w warunkach globalizacji*, edition II, „Dom Organizatora”, Toruń.
- Stankiewicz M. J. (1988), *Metody inwentyczne w rozwiązywaniu problemów strategicznych przedsiębiorstwa przemysłowego*, Wydawnictwa UMK, Toruń.
- Stoner J. A. F., Wankel Ch. (1992), *Kierowanie*, PWE, Warszawa.
- Wawrzyniak B. (1976), „Technika Kepnera – Tregoe”, *Przegląd Organizacji*, No. 7.
- Webber Ross. A. (1984), *Zasady zarządzania organizacjami*, PWE, Warszawa.
- Wit Bob de, Meyer R. (1998), *Strategy – Process, Content, Context*, Thomson Busienss Press, London.
- Zieleniewski J. (1969), *Organizacja i zarządzanie*, PWN, Warszawa.