DECISION-MAKING IN THE CLUSTER UNDER CONDITIONS OF RISK

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Abstract

Purpose: three main research questions in the paper are: what is characteristic for risk management in business cluster? What factors influence on the decision-making process in the cluster under conditions of risk and uncertainty? Which mental abilities of cluster managers, highlight their decisiveness, and are conducive in cluster management under conditions of risk and uncertainty?

Methodology: methods of analysis and synthesis have been applied, within theory of management (mainly the theory of decision) and systems theory.

Findings: in the article, the essence of risk and uncertainty was characterized, highlighting that uncertainty, contrary to risk concerns the alternations which are difficult to be assessed, or events whose probability due to the lack of information cannot be entirely estimated. This paper highlights the fact that the risk is present in all areas of the cluster. The need to manage the risk (identify, measure, analyse and control it) is inscribed in the nature of strategic decisions in a cluster. Features like: self-direction, self-discipline, simultaneity, and resistance are conducive to decisiveness of managers. Decisiveness is mental ability to "move" between extremes in the fields of: power, time and cultural diversity – which is especially important under conditions of risk and uncertainty.

Originality: An interdisciplinary approach to the problems constitutes the added value of this article.

Keywords: business cluster, environment, strategic decision-making, decisiveness, risk, uncertainty

1. INTRODUCTION

Cluster constitutes one of the contemporary forms of an organization that exhibits the ability to maintain the development, as well as gain, and maintain competitive advantage under conditions of a turbulent environment. It is an example of a flexible organization based on the knowledge of high innovative potential that enhances efficient development and effective use of resources. The organization is comprised of a group of specialized entities (companies, universities, business support institutions, representatives of local authorities), working closely together, but also competing in some areas, located in the immediate vicinity, linked by formal and informal relations, horizontal and vertical relationships, creating the value added within the established partnership. Clusters that may be established in all sectors of economy, not only in those technologically advanced, are nowadays considered a way to develop entrepreneurship, and a mechanism of regions economic activation.

Considerations included in this article point out that clusters are established in order to meet particular needs of their members, using material and immaterial resources being at their disposal. It is therefore necessary to manage the cluster efficiently that is, decisions that are made by the decision-makers of an organization should aim at the implementation of established goals, including the rational use of resources. The decision-making in a cluster occurs in various circumstances and conditions, under dynamic environment alterations that obstruct this process. Such a situation brings about an increased risk. Additionally, managing the increasingly complex structure of a cluster that changes in particular stages of its existence, also increases the risk level.

The objective of this article is to present the influence of risk and uncertainty in the process of making strategic decisions in a cluster. Management in such conditions requires considerable decision-making abilities (decisiveness) from managers, as exemplified by the aptitude to make choices in view of rational (rules, principles, methods) and irrational (emotions and intuitions) factors. The process of making strategic decisions under conditions of risk and uncertainty is

therefore complicated – complex to a great extent, dynamic, with numerous feedbacks and encompassing a network of interdependent processes. Within defined subject of article, the authors focus on three main research questions:

- what is characteristic for risk management in business cluster?
- what factors influence on the decision-making process in the cluster under conditions of risk and uncertainty?
- which mental abilities of cluster managers, highlight their decisiveness, and are conducive in cluster management under conditions of risk and uncertainty?

Taking into account the fact that the research subject matter tackled by the authors is still young and developmental in the world, the article focuses primarily on the results of theoretic studies. The authors take the view that this very study will constitute a basis for their further empirical studies in the scope of the analysed research problem. It will most certainly be conducive to further knowledge development within the framework of the widely understood cluster management process, including scientific discussion as regards new challenges associated with clusters development.

2. ENVIRONMENT OF A CLUSTER AS THE SOURCE OF RISK AND UNCERTAINTY

Business cluster constitutes an example of territorial concentration of specialised companies, mostly micro, macro, and middle ones, functioning in the same and/or related economy sectors, cooperating and competing, using mutual resources, infrastructure and fully-fledged providers, associated in market and non-market terms with the network of public and private institutions supporting their activity. Similarly considers M. Dan. She stresses that clusters are geographic concentrations between enterprises, universities and research institutions and local or regional authorities, and due to this they attract specialized suppliers, can select from a pool of work force, and have an easy access to knowledge and information (Dan, 2012). Organizational learning and knowledge creation among cluster participants can improve cluster efficiency and effectiveness, and may act as a spur to innovation (Braun *et al*., 2005). P. Maskell argued that the co-located firms within related industries enhance the ability to create knowledge by variation and a deepened division of labour (Maskell, 2001). Therefore numerous governments use business clusters as an important policy tool for regional economic development on account of their capacity to attract talent, which results in a variety of information and knowledge exchange modes (Lai *et al.*, 2014).

A business cluster is also a form of a network that occurs within a geographical location, where the proximity of firms and institutions ensures certain commonality, increases the impact and frequency of communications and interactions (Kuah, 2002). M.E. Porter has described clusters as a kind of new spatial organisation form placed in between the "arm's length markets" and "vertical integration" systems (Porter, 1998). Furthermore, basic indicators of cluster structures encompass: commonality – the businesses are operating in common fields or related industries with a shared market focus or sphere of activity; concentration – there is a grouping of businesses that can cooperate and interact; connectivity – interconnected/linked/interdependent organisations, with a range of different types of relations (Lyon and Atherton, 2000).

Contemporary clusters more frequently constitute historically established entities of a business that is run conscientiously, stimulated by the ongoing drive to obtain particular benefit, associated with the permanent fulfilment of external and internal stakeholders' needs. They constitute a system category, that is an organised, orderly set of material and immaterial elements, related in mutual, various, indirect and direct relations. The system creates a qualitatively new whole, distinguished in a changeable environment. Clusters as artificial systems constituted by man, show an attribute peculiar to natural systems, namely striving for survival and development. As open systems, they may function and develop through creating beneficial relations with an environment. It is often pointed out that business clusters exist primarily because some places offer a superior business

environment in comparison with others (Duncan *et al.*, 2013). The clusters working environment was rated by many researchers as having the greatest influence on innovation, which points to some of the intangible attributes and motivators of creativity that exist by simply being in a vibrant and active geographical area (Fallah, 2005).

Clusters could be handled as open systems getting influences from the environment where they act, but the influence is not only unilateral – organizations also target shaping and reshaping the environments for themselves (Reino *et al*., 2007). Cluster environment is most frequently defined as the general positive and negative conditions that influence cluster functioning and the behaviour of its members. Cluster environment consists of internal environment and external environment, wherein the internal environment factors are easily controllable and manage in the organization, while the external environment factors are the uncontrollable factors due to changes in the legal, social, economic, technical in business enterprise (Hiriyappa, 2008). In entity terms, cluster environment includes a set of "actors" and interest groups represented owners, managers, customers, suppliers, etc., known as stakeholders, who are directly or indirectly affected by the organization work and have the means to control it (Voiculet *et al.*, 2010).Cluster environment is defined as a sum of complex factors that influence or may influence any aspect of cluster functioning, its objectives, size, structure, acting results and methods, and is a subject to continual changes (Davis and Powell, 1992). The factors that cause constant changes encompass: demographic changes, social changes, changes in the lifestyle and cultural trends, technological changes, changes in an ecological environment. On the other hand, non-constant changes may concern: a state of political and economy system transformation, changes in economy law, changes in a state attitude towards entrepreneurs, changes in the inflation level, size of products, rates of change, interest rates (Grant, 2003). Contemporary clusters through functioning in a complex environment and competing in a global market have to take new dimensions into account, in which their objectives, functions, processes are conducted e.g.: global competition, mega-concentration of ownership and capital, new value systems, intensification of the enterprises cooperation between enterprises, the ICT technology development, changes in innovative policy, and increase in the significance of information and knowledge. Simultaneously, Europe needs to reinvigorate traditional clusters, but also needs new emerging industries and clusters (Ketels *et al*., 2012).

Under conditions of risk and uncertainty a "strategic surprise" may occur. The notion was defined by H.I. Ansoff as a decisive situation determined by the following factors (Ansoff, 1997; Kipley and Lewis, 2009):

- the problem appears unexpectedly,
- as a result of a particular problem appearing suddenly, other problems come up, and the entity has little experience in solving them,
- lack of reaction to the problem means either the loss of considerable financial resources or a chance to develop,
- reaction to the problem is urgent, however the problem cannot be solved immediately, applying the systems and procedures used so far.

The author of the "strategic surprise" concept deem that managers should gather possibly the most information on the problem, hence on the "surprise" essence and immediately start to filter, process and analyze them, in order to determine the scope and then the strategic ways to solve the problem. This massive information inflow on the problem and their excess create conditions that are not conducive to conduct the cognition processes rationally and to make a decision in a short term (Kipley and Lewis, 2009).

The increasing complexity and dynamics of a cluster environment, constitutes the basic source of risk and uncertainty, that is ubiquitous in running a business. It poses simultaneously a challenge for the decision-makers in a cluster, in order to treat the conditions of permanent uncertainty as a chance, not as a threat, including an additional force that creates new development opportunities.

Uncertainty describes the quality of our knowledge concerning risk because uncertainty may affect both the probability and consequence components of the risk (Willows and Connell, 2003).

Uncertainty and variability, both often referred to as uncertainties, are present in and affect every risk assessment, where the risk assessment itself can be further divided into different stages: hazard identification and characterization (dose-response assessment), exposure assessment and risk characterization (Filipsson, 2011). A. De Meyer proposed four types of uncertainty (Rabechini *et al.*, 2013):

- variability: random variations, however predictable and controllable around the known objectives of cost and time-frame;
- foreseeable uncertainty: a few known factors will affect the project in a predictable way allowing therefore that contingency plans be established to deal with the consequences of an eventual occurrence;
- unforeseen uncertainty: one or more significant factors that influence the project that cannot be predicted, thus demanding solutions when and if they occur;
- chaos: completely unpredictable factors entirely invalidate the objectives, planning and approach to the project, requiring its repeated and complete redefinition.

Risk is generally defined as the combination of hazard and vulnerability, where hazard represents the probability that a potentially detrimental event of given characteristics occurs in a given area, for a time period and vulnerability is the degree of intrinsic weakness of the system (Darbra *et al.*, 2008). The risk determining final effects of a cluster activity may have both the positive and negative dimension. The risk in a cluster poses a threat, danger, a possibility to sustain a loss, uncertainty of functioning in more or less foreseeable future, but also – a chance, an element that is integrally associated with the conducted business, influencing positively the cluster objectives implementation process. It should be highlighted that running any kind of business by clusters and in clusters is not possible without sustaining risk. The risk is associated inter alia with processes of investing one's own resources (material and immaterial) in the mutual activity in a cluster, the involvement of particular members in order to conduct mutual project, and other decisions, the strategic ones in particular, whose effects will be finally known in the time perspective. The main risk factors in clusters result from changes occurring in the cluster internal and external environment and may be both identified and unidentified by a decision-maker. Changes made in a cluster are most frequently comprised of (Maslyk-Musial, 2003): adaptation, revitalization, transformation and revolution. In every case, the change of a character of a cluster relation with the environment brings about the need to redefine one's own barriers or to re-identify the organization and build a new sense of identity.

3. THE NEED FOR RISK MANAGEMENT IN A CLUSTER

In view of the fact that risk, its typology, sources, and estimation methods constitute a complex notion, there are still many various definitions, as regards risk management. According to J. Adams risk management involves making choices in the face of uncertainty (Adams, 1999). H.P. Berg considers that risk management is a continuous, proactive and systematic process to understand, manage and communicate risk from an organization-wide perspective. It is a systematic approach to set the best course of action under uncertainty by identifying, assessing, understanding, acting on and communicating risk issues (Berg, 2010).

Cluster managers are faced with many different types of risk (individual, market, internal, external, objective, subjective, clean, speculative, operational, strategic, static, dynamic, financial, non-financial etc.). Particular kinds of risk are closely related to one another, thus as a result one kind of risk may serve as a basis for another one. Comprehensive approach is currently an essential element of efficient cluster risk management. This type of management, is, in general terms, determined as making right decisions targeted at conducting actions that lead to achieving by a cluster an acceptable risk level. These are generally understood managerial actions, whose task is to identify, assess risk and uncertainty, and prevent their negative impact on current and future cluster development. Risk analysis includes: risk assessment, risk evaluation, and the identification

management alternatives. It is the process by which knowledge concerning the probabilities, uncertainties and magnitude of future events is brought together, analysed and organised by the decision-maker in a cluster (Willows and Connell, 2003).

The process defined in such way aims at providing maximal and permanent benefits in particular areas of cluster activity and making right operational, tactical and strategic decisions towards the materializing risk. The aim concerns both reducing the risk level and protecting oneself against its possible negative results. Managing the cluster risk as a domain of a cluster manager's actions, should be closely connected with the cluster management and relate to rational actions in a risk situation, including permanent risk: getting familiarized with priority risk factors, both the endogenous and exogenous, as well as with rules that control their changes, solving decision problem associated with risk, monitoring the risk itself, as well as active and passive attitudes of heterogonous members of the organization towards any risk form.

Managing risk in a cluster should be treated as a fundamental element of its organizational culture and a sub-process of strategic management. Cluster manager who deals with risk in a cluster should be able to identify the risk duly quickly, when it is considerable and requires certain decisions, reactions and determining when it may be skipped in analyses, hence disregarded. Decision-making process on the basis of risk is relatively straightforward if several conditions are met (Willows and Connell, 2003):

- the analysis includes all significant hazards and impacts that could affect and be affected by a decision,
- decision-makers want to identify the best options of risk, and choose the option that best meets their objectives and criteria,
- likelihoods and consequences are known or can be calculated for all significant outcomes for all decision options (now and in the future),
- costs of implementing all decision options are known,
- consequences can all be expressed in a common unit of "currency" that is comprehensible to all stakeholders,
- the decision-maker is "risk neutral", or if not risk neutral is able to specify a preference for particular types of risk.

Risk management is about making decisions that contributes to the achievement of organization objectives by applying it both at the individual activity level and in functional areas (Berg, 2010). Therefore, a successful process of risk management in a cluster may generate numerous tangible benefits that may be reflected in: paying more attention by decision-makers in a cluster to issues of key importance, shortening the response time to crisis situations, reducing the risk costs. Manager of a cluster, thanks to the proper risk management, is able efficiently to use the arising opportunities/chances, as well as build and permanently strengthen the resistance of the organization to the effects of unfavourable events, occurring in environment.

4. DECISION-MAKING PROCESS IN A CLUSTER UNDER CONDITIONS OF RISK AND UNCERTAINTY

The decisiveness implies fluency of the manager in making right decisions in various situations – mainly under conditions of high risk and uncertainty, which from the cognitive viewpoint are most difficult situations. "Decisive manager has the ability of reaching daring decisions, feels comfortable about it and works expertly and relatively rapid. The decisiveness indicates character constancy, willingness to learn, considerable tolerance of ambiguity and high stress resistance. It is an attribute of the charismatic leader, which is also associated with following features: activity, commitment, conscientiousness and an ability to overcome the reluctance of subordinates as for changes. Furthermore, the decision-making ability is an asset derived from the manager's personality. Moreover, it is an effect of their intellectual development, as a result of solving

numerous, new and complex problems under conditions of uncertainty, namely in a situation of considerable information gap, obsolescence of information and information chaos" (Jankowska-Mihulowicz, 2014).

The decisiveness of a cluster manager and the rest of its main decision-makers – who may be treated as a cluster decision-making system – determines the rightness of strategic decisions, and results in the increase in competitiveness of the organisations setting up a cluster and their ability to develop and increase the strategic potential of the entire cluster structure. In cognitive terms, the following features are in favour of the decisiveness of cluster managers, under conditions of risk and uncertainty:

- self-direction (inner-direction) – independence while making choices, a sense of having control over the cluster; setting and changing goals in order to obtain intended changes of the course of processes in an open system. The relatively stable self-direction constitutes the essence of managers' decisiveness. It requires internal motivation – reinforcement from the inside (coming from the cluster), which is stronger than the external one (coming from the environment). When other factors have an equal impact, self-direction leads to the increase in cluster decision-makers' self-esteem, and a sense of being independent and self-sufficient,
- self-discipline – an ability to apply the point strategy that consists in controlling activities conducted in a cluster and achieving its objectives in a particular moment – it results in an advantage of positive emotions over negative ones in managers, an increase in energy, positive self-esteem, the control of the level of simultaneity and resistance, analytical (linear, sequential, cause-effect) approach to problem-solving, precise assessment of situation, and small tolerance of ambiguity (Wieczorkowska-Wierzbinska, 2011). Self-discipline determines rational decision-makers' approach to problem-solving, according to the model comprised of the following stages: defining a problem, identifying the solution options, assessing the options and choosing the best one, implementing it, and assessing the results of the actions. It is equally necessary to provide numerous feedbacks between particular stages of the indicated model,
- simultaneity – an ability to apply the interstitial strategy that consists in conducting simultaneously many tasks in a cluster that have different aims. Simultaneity results in an increased flexibility and adaptability in acting, synthetic (multifaceted, generalizing, intuitive, visionary) approach to problem solving, considerable tolerance of ambiguity (Wieczorkowska-Wierzbinska, 2011). As far as features of a turbulent environment are concerned, cluster managers' simultaneous approach causes that strategic decisions are made in a way that is different from the model one (rational, sequential). Drivers are driven by their own emotions, experience, intuition, they simplify the decision-making process in a stage of problem analysis, creating choice options, and assessing them. Introducing a decisions is usually to and greater extent based on tests and experiments than on plans and constitutes a response to current actions of internal and external stakeholders,
- resistance – constitutes entity's decisiveness necessary condition, hence their relatively stable self-direction. Resistance also means a cluster decision-makers' ability to regulate emotions reciprocally through an optimal selection of combinations as regards various types of stimulation and excitement levels. Sustaining the resistance is a sign of the organization management's emotional intelligence.

In order to fulfil the aforementioned demands: self-direction, self-discipline, simultaneity, and resistance – it is essential for decision-makers to continually "move" mentally between the extremes in various spheres of a decision-making process. Power constitutes one of such areas.

In the cluster there are numerous centres of power. Leader of cluster creates a vision, a manager is responsible for the strategy implementation. Moreover, each entity constituting a cluster has its own management and strategies, and it aims at making the cluster strategy conducive to its development. Different positions and functions of the decision-makers in such a type of structure cause different perception of the risk and uncertainty, time perspective, object, scope, scale, or significance of problems (Bembenek *et al*., 2014). Furthermore, managers frequently consider

decisions of great importance, whilst there are no or few objective and clear rules as regards making a decision, as well as the choice criteria are subjective and ambiguous. It hampers reaching a common ground by the entities involved in the cluster. Formal power is therefore not sufficient in order to finalize the undertaking, and one may talk about a decision when it is already made. It is therefore not enough to have authority or even be right – one needs to have an ability to force through what they consider right. Strategic decisions in a cluster are then a result of negotiations, compromises and interests confrontations – they rarely constitute a result of objective values maximization. Successful negotiations constitute an interactive process that is informational, communicative, and decisive, and in which two or more parties achieve a satisfactory solution (possible to be adopted, satisfying) for the problem that is subsequently put into practice at the time agreed. While negotiating, decision-makers cannot make decisions independently. They need to make concessions to one another and offer benefits to achieve a consensus. The power of main cluster decision-makers is therefore not an absolute value. There are extreme situational conditions, when one should adopt an autocratic way of making a decision – hence centralize the authority or use a group style and make a decision on the basis of a consensus, or decentralize the authority. Most frequently however, decisions in a cluster result from negotiations, hence from a managers' applied combination of extremely different cognitive approaches targeted at an objective, namely a consensus as regards ways of fulfilling cluster mission. Therefore in a cluster in different periods of time, relations and decisive areas may dominate: competition, cooperation or co-opetition (Bembenek *et al*., 2014).

Time is another sphere – in which it is essential for managers to accept and apply extremely different approaches to making strategic decisions.

In a situation, when time constitutes a basic factor in achieving a competitive advantage by a cluster, decisions should be made quickly. Then the decision-maker should apply the work enthusiast style – represent an attitude full of belief and motivation, be interested in the idea of solving problems, gaining progress and making transgression in a cluster, identifying with problems, sustain an optimal excitement relatively long (intellect stimulation and high level of interest in task), and quickly respond to changes.

The procrastinator style is an extremely different style, at the end of the continuum in question (Lat. *cunctari* – to procrastinate, put off, hesitate). The style is represented by a manager knowingly (conscientiously, on purpose), who acts slowly, defers (prolongs) making a decision and is cautious. The reasons for deferring are: a need to widen the scope of information and knowledge on the decisive problem, a necessity to persuade the allies to decide, postponement of an enterprise investment or restructuring in order to wait until the unfavourable economic situation is over etc.

In the practice of cluster management, both the styles are essential, and when applied conscientiously and in a controlled way, require leadership's considerable intelligence. However, throughout the ages, a tendency to accelerate the decision-making processes is easily noticeable. This civilization change progressing evolutionarily and its impact on management was described by the historian S. Kern in the following way: „To survive in the future, you're going to have to make decisions on the run (Lebow and Simon, 2007):

- most organizations have the capacity to be fast. But very few have figured out how to stay fast. You'll see short bursts of acceleration, then they fade. Management hasn't caught on that it has to make the company hard-core rapid in a way that endures;
- the fact is, speed requires sacrifice. We have to manage more intuitively. There is less time for deliberation, less payoff from planning;
- instead of digging in and dissecting situations thoroughly before deciding what to do, we must rely more on analysis by action;
- problem solving has to happen in real time. This means managers need to become adept at "calling audibles" – that is, changing the play at the last moment to exploit new information and to fit constantly fluctuating circumstances;
- our peripheral vision must become better;

- the historical records show that humans have never, ever opted for slower".

Entering a cluster structure by an enterprise is equivalent to the necessity of moving from the culture that is of little diversification (frequently a mono-culture) to the one of considerable diversification (multi-culture). The level of organization diversification constitutes another factor that essentially influences the managers' mentality and their decision-making processes.

In general (simplified) terms, one may assume that a mono-cultural organization comprises the following features: simplicity, uniformity, consistency, small tolerance, impenetrability, lack of openness, lack of trust towards strangers, stability, stagnation, certainty, limitation, and recession; as far as a multi-cultural organization is concerned, the features are as follows: variety, complexity, lack of consistency, contradictions, conflicts, high tolerance, instability risk, uncertainty, openness, great trust towards strangers, expansion, development, transgression, and progress.

Clusters associate non-economic and economic organisations, in which there are groups of stakeholders from various organisational cultures. Their blending in a cluster cause the necessity to take the social and cultural aspects (age, sex, professional group, position, education, creativity, qualifications and experience of members) into account in the management. Taking into consideration such a diversity to a considerable complicates decision-making process (Bembenek *et al*., 2014). Making strategic decisions results brings about a necessity to communicate as regards managers representing various organizational cultures. It results in mingling and the diffusion of various values, standpoints, positions, visions, intentions, motives, needs, attitudes, behaviours etc. represented by them – which is a sign of multicultural organization (House *et al*., 2004) forming in which a cultural cooperation occurs. Such an organization has a substantial strategic potential, resulting from the abundance of differences, including holistic thinking, unique methods, multiple disciplines, wide range assessing, and disparate types of information that will need to be integrated to achieve a credible risk-weighted estimate of value in management of cluster (Koller, 2005), which when used skilfully, may become an essential source while obtaining competitive and strategic advantage by the entities setting up a cluster.

5. CONCLUSION

Risk and uncertainty, both of the multidimensional and multifaceted character, are present in every stage of a cluster development, in every stage of conducting mutual actions, ranging from the design to the implementation stage. One may talk about risk when there occurs a real possibility to determine (estimate) the probability of the results of the choice options in question. However, in case of the lack of such a possibility, the decision-makers have to face uncertainty. In the case of advanced investment projects in technological clusters, associated with innovative research and development works, strategic decisions in a cluster are burdened by high risk, as regards meeting the established goals in a particular time. Furthermore, turbulent environment increases the investment risk. In many cases, the decision-makers in a cluster are familiarized with this kind of risk, however they belittle it. It is of considerable significance therefore to make the stakeholders in this group aware that cautious, professional approach to the risk problem, becomes nowadays not only a need but a necessity.

Implementation of the complex risk management appears to be the key solution from the viewpoint of further development of this organization, assuming that almost every socio-economic undertaking conducted in a cluster is burdened with risk. It may be treated as a plan formulating process as regards actions aiming at lasting optimization of a particular kind of risk, associated with cluster existence, including making rational decisions that are targeted at minimization , elimination of negative risk results, as well as maximization of favourable risk effects in particular areas in which a cluster functions. It is essential to determine, where the risk occurs, what size it is, how it can influence the processes conduced in a cluster, and what approach (active of passive and revolutionary or evolutionary) to identified risk is more beneficial from the survival and development standpoint. In the face of turbulence and globalisation it is obvious that without

efficient tools of risk management, one cannot stand permanently against the competition.

Features like: self-direction, self-discipline, simultaneity, and resistance are conducive to releasing decisiveness of cluster managers. In order to obtain them in the management practice, it is essential to develop decision-makers' mental ability to "move" between extremes in the fields of: power (centralizing and decentralizing the power, and an ability to negotiate), time (from quick decision-making to consciously defer making a decision) and cultural diversity (being aware of features of a mono- and multicultural organization and an ability to make deliberate changes towards multiculturalism). Described mentality of the decision maker in cluster is especially important under conditions of risk and uncertainty.

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