

## Attributes of Formalisation Risk Culture and Its Typification in the Enterprise

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**Abstract.** Forming a risk management culture requires an understanding of the attributes of formalising a risk culture and defining its type depending on the efficiency of its certain parameters. The purpose of the study is to systematise the attributes of formalisation of risk culture and identify the type of risk culture in the enterprise. To achieve the objectives, the attributes of formalising the risk culture in the enterprise were analysed and synthesised, defining their characteristics and definition parameters. To identify the type of risk culture at the enterprise, a matrix approach was used, according to which the type of risk culture was described in two parameters: “methods and control” and “level of personnel engagement”. Each of these parameters is considered according to two qualitative levels of impact. The “methods and controls” parameter is considered in terms of the existence of hard and soft risk management controls in the enterprise. The level of “personnel engagement” parameter can be either high or low and it indicates the level of staff motivation and support of the employees by supervisors on risk management. As a result of the formalisation, four types of company risk culture were identified, characterising the behavioural patterns and motivational factors of company employees, depending on the efficiency of regulations, the understanding of risks by personnel and risk management techniques. The practical value of the findings is that each employee will understand their role and responsibilities regarding their participation in the company’s risk management system, and managers will be able to assess the level of alignment of all employees in terms of using risk management practices and determine the best management styles and practices

**Keywords:** risk management, risk factors, risk culture, risk management culture, risk factors, risk culture typification

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## Introduction

As companies operate in the marketplace, they seek to prevent the threats they may encounter during their activity. At the same time, a number of challenges must be addressed. First, it is necessary to establish and implement the main stages and activities of the risk management process, namely: context determination, identification, analysis, certification, use of risk management tools, monitoring and auditing of risks, systematic use of risk management mechanisms (standards, policies, decisions, procedures). Secondly, to incorporate them into the business operations and management system of the enterprise. Thirdly, to ensure the formation and promotion of risk culture and its organic integration with the organisational culture in the entire company. The first two tasks seem to resonate in the management practices of the enterprise, at least through the control and communication system that has been built. However, the biggest challenge is to understand the existing risk management culture at the enterprise and create an organisational environment that will facilitate the identification, assessment and processing of risks, and form an open communication about risks between all employees of the company. These are the values, beliefs, awareness, knowledge and practices for dealing with shared risks that apply to the activities of all employees in the enterprise. As a result, risk-oriented management and risk culture are formed at all levels of management from an individual employee, line manager and top manager to senior management.

The organisation formalises the risk management process according to its own terms. It depends on the characteristics and specifics of the business itself, the management system, the organisational structure and how the company's employees perceive and manage risk. The risk management culture is part of the overall organisational culture of the enterprise and determines its risk-oriented aspect, namely the behaviour of employees regarding the understanding, perception and use of risk management in their activities. That is why it is important to understand how the organisational culture is formed within the enterprise in terms of integrating the risk management system into it. To understand how much the values and beliefs of management at the enterprise are involved in the risk management process, it is advisable to define and systematise the attributes of risk culture formation.

*The purpose of the study* is to systematise the attributes of forming a risk management culture at the enterprise and formalise the type of risk culture of the enterprise by significant parameters.

According to the objective, the article defines the following *tasks*: to investigate the attributes of risk management culture formation, to conduct their systematisation and to propose a scientific methodological approach to the formalisation of risk culture with the definition of its four types in the enterprise.

## Literature Review

An important part of understanding and, accordingly, forming a risk culture in an organisation is identifying the

main attributes by which company employees perceive risk management, carry out management procedures and analyse the effectiveness of risk management in the company.

O. Dyugovanets & I. Dovba have identified a broad list of determinants of risk culture development in the corporate governance system as: the integration of risk identification, analysis and management processes when making management decisions; the regular nature of risk culture development in the corporate governance system; transparency and disclosure of information about the results and effectiveness of risk management; continuous development and improvement of approaches to risk management within the organisation; implementation of international principles in the corporate governance system, ensuring the protection of shareholders' rights, equal treatment of shareholders, recognition of the rights of interested parties provided for by law, timely and accurate disclosure of information on all important issues related to the organisation, effective control over activities management by the management board (supervisory board), as well as accountability of the management board to shareholders; coordination of measures and formation of a clear strategy in the sphere of risk management by executives, and in corporate governance; integration of risk management system with business processes of the enterprise [1]. This broad list of attributes of risk culture development must be systematised in terms of the organisation of the risk management process in companies. In addition, this list is more concerned with protecting shareholders, board members and management against risks, while a significant number of risks in other areas of the company are left unaddressed. Risk management should be integrated harmoniously into the company's overall management system, and to do so, it is appropriate to eliminate control procedures that overlap. Excessive control does not always contribute to ensuring the security of the company's activities.

I.V. Semenyutina considers the attributes by which the level of risk management culture can be identified: the existence of a common understanding of basic concepts, principles and goals in risk management; the principles for determining risk tolerance, which are consistent with all interested parties in the company's activities, its resources and goals; the level of management competencies in risk management; interaction and consultation of the management team in identifying risks and justification of the optimal solutions for risk management; financial incentives for staff to assist in solving risk management problems; integration of risk management methods and procedures in all areas of business activities; standardization of the risk management process; availability of standards and regulations for risk management in the enterprise [2]. This list of attributes for establishing a risk management culture is quite comprehensive and tied to the risk management process, yet it would also be useful to define the values of the employee team when dealing with risk.

C. Turkoglu sees risk culture as an oxymoron. He argues that it is impossible to achieve common values, beliefs,

and behaviours in relation to risk [3]. However, a common understanding of risk and reporting risk at different levels in an organisation is vital for its effective management. His concept of risk management culture includes all stages of the risk management process, namely risk identification, analysis, assessment, mitigation, how risk information is communicated to different levels of the organisation, how risk decisions are made, and how acceptable risks are defined. After all, it is the formalisation of a common understanding of risk management that is important in the formation of risk culture. However, the consideration of these aspects of risk culture formation is incomplete and needs to be completed with regard to the formation of risk-oriented management.

S. Unterrheiner identifies eight aspects of risk culture: governance, tone at the top, accountability, incidents and escalation, encouragement and reward, training, succession planning and talent management, acceptance, and core competence support [4; 5]. But what the author neglected was the issue of communicating within the company when dealing with risk.

J. DeLoach considers the following elements in identifying an organisation's risk culture: the tone of the organisation; the physical mechanisms that control the risk culture; the internal attributes that stimulate the risk culture; the external attributes that stimulate the risk culture; the subcultures that can influence risk management; and the attitude towards the overall culture [6]. But a more specific understanding of the tone of the organisation when dealing with risk would be helpful.

B. Kpodo & K. Agyekum consider four elements that identify the risk culture in an organisation: tone from the top (management's demonstration of support for risk management); accountability (the requirement to report on risk management); effective incident management (the ability of staff to make effective risk decisions); and compensation (the link between reward and risk management behaviour) [7]. This list lacks an understanding of the organisational and communication aspects that determine staff behaviour regarding risk and reward management.

K. Bakker & S. Somani, considering the organisation's culture, of which risk culture is a part, define it as the overall system of messages through which the organisation shapes its business behaviour, its response to the challenges and threats of the external environment and its perception of the world [8]. They define the following elements of the risk culture: attitudes towards operating a business, personnel behaviour, ethics, communication patterns and etiquette. All these components should certainly be reflected in the formation of the organisation's risk culture, but they are not exhaustive, and control procedures and support for risk management in the company are also not reflected here.

Ph. Silberzan & M. Jones (2012) see risk not only as a threat but also as an opportunity for development, so they suggest developing a culture of uncertainty rather than a culture of risk [9]. The risk culture is based on the traditional decision-making paradigm, which consists in choosing from a number of options the best in terms of benefit

and risk. The culture of uncertainty, in their opinion, characterises the future, which is not only unknown but also objectively impossible to understand, even theoretically. This is especially true for completely new, unexpected events. In an uncertain environment, the decision-maker does not choose among the options that already exist but rather creates those options. The paradigm for decisions under uncertainty becomes the creation of options and their implementation in the face of uncertainty. Thus, the culture of uncertainty is based on creative and intuitive action planning and decision-making. However, not all threats are associated with uncertainty, for a certain proportion of threats it is possible and necessary to use standard risk management procedures.

M. Power, S. Ashby & T. Palermo view an organisation's risk management culture as a set of interrelated factors and compromises [10]. They also refer to risk culture as an ongoing process or as recurring and renewing processes; a combination of formal and informal governance processes involving multiple behaviours and habits that collectively form a risk culture at any given time. However, they note that an organisation may not necessarily have a single risk culture, meaning that the risk culture may be unevenly distributed within the organisation. The most important thing, in this case, is the organisation's awareness of the balance between risk acceptance and control. Studies in [10] show that there are organisations that approach risk culture management in a more organic and less structured way, rather than through management and control-oriented approaches. There is a need to identify the main factors of risk culture formation that are subject to formal and informal management.

R. Abuzarqa looks at the relationship between organisational culture, risk management and company performance [11]. He hypothesises that organisational culture influences risk management and company performance. The confirmation of this hypothesis is that if the culture and operating principles of employees are compatible with those of the company, it is determined by high performance and efficiency. One cannot fully agree with this thesis. Ensuring high performance can be a result of how the company manages risks. However, this will not answer the question of how this management is carried out and how the process of forming a risk culture in the company takes place. The development of organisational culture and risk culture also occurs through the feedback mechanism, both from top to bottom and from bottom to top.

A. Paalanen proposed sixteen types of risk culture, which are formed in four dimensions [12]. These four dimensions were selected using factor analysis to describe the risk culture in organisations. Each culture type represents one end of all four dimensions: the level of formality of management procedures; the decision-making process; risk perception; and focus [12]. The dimension of formalities of procedures is related to the formality or flexibility of management methods and business processes. It describes how units are managed, how flexible or rigid processes are, what is the attitude towards adhering to or bending rules,

and how much intuition is used compared to predefined rules and procedures. The extreme ends of this dimension are the level of formality and flexibility of management procedures. The decision-making dimension is about how decisions are made. It describes how much effort is spent to prepare for decisions, how fast decisions are made, and how detailed decisions are. The extreme ends of this dimension are called a reasonable and dynamic decision-making process. The risk perception dimension is about how risk is understood by all employees of the company. It describes the attitude towards risk in the company, namely whether risk is seen as an acceptable or unacceptable part of life, as a threat or a possible deviation. The extreme ends of this dimension are called risk acceptance and risk avoidance. The focus dimension describes whether a business is seen via technical assets or via people and processes. It determines how much risk management focuses on technical aspects, such as profit or production, or behavioural factors, such as motivation, competence, or reputation. The extreme ends of this dimension are technical and behavioural focus. Usually, such a thorough analysis is very interesting and allows for comprehensive coverage of the main aspects of a company's risk culture, but it is also quite complex. Sixteen types of risk culture are difficult not only to identify but also to comprehend.

D. Hillson proposed an A-B-C model of the company's risk management culture using three components: attitude, behaviour, and culture [13]. Attitude defines the position of an individual or group towards risk and risk perception. Risk behaviour comprises external observable risk-related actions, including risk-based decision-making, risk processes, risk communications etc. Risk culture is values, beliefs, knowledge, and understanding shared by a group of people with a common goal. The A-B-C model is straightforward in describing how risk culture relates to risk attitudes and risk-taking behaviours. However, this does not help to understand the management aspect of the risk culture, the role and support of the management of employees in the process of communication and risk decision-making.

S. Mushnikova considers the need for a company to develop a "risk-based mindset" and its recommended vision as an element of an enterprise's safety management culture [14]. Such a vision, according to S. Mushnikova, is aimed at the formation of managerial competencies for risk assessment and analysis, identification and implementation of opportunities in achieving strategic and tactical goals of enterprise development at all levels of enterprise management. At the same time, the level of competence of decision-makers and their personal qualities are brought to the fore. Indeed, the risk culture is formed by the behaviour of the company's employees. However, what the author neglects is how and by which management techniques the perception of risk management in the company, the engagement of employees in risk management and their attitude to the decision-making process under conditions of risk and uncertainty are shaped.

J.M. Farrell & A. Hoon characterise the risk management culture as an organisation's system of values and

behaviours that determine the content and form of decisions made for risk management [15]. They believe, that the risk management culture is effective when employees know the attitude of the organization's management to risk management, the limits of their powers, and can openly discuss with management the risks that they will have to take in order to achieve the company's long-term strategic goals. However, the risk culture influences the decisions made, even if the company does not analyse possible risks. The process of building a company's risk culture cannot only be formalised and must include the development of values and preferences when developing risk management practices.

O. Vovchenko defines the following determinants of the effective risk culture of the bank: the unity of individual and corporate goals, values and ethics of business behaviour; the implementation of a risk-oriented approach to management; the dynamism of development, which is determined by the readiness of risk departments responsible for risk management to implement and improve risk management technologies; openness and transparency of internal corporate communication regarding risks and their management; orientation to create additional value of the organisation through the creation of an established system of motivation of personnel to manage risks, justification of the impact of the effectiveness of the functioning of the risk management system on the market value of the company; the application of both individual and collective responsibility for the risks of the bank, which forms corporate unity risk management [16]. However, while considering various approaches to the interpretation of the economic content of risk culture, O. Vovchenko does not define how its determinants shape it. This study lacks the very process of forming a bank's risk culture and the specifics of its development, and the attributes of its definition are vague and do not reflect a controlling function in risk management.

L.M. Titarenko, B.Yu. Rostiyarov, V.A. Yatsenko, considering the organisational aspects of risk management, determine the behaviour and forms of management activity of managers, their ability to give explanations, make an expert assessment of management decisions made, create conditions for identifying problems, and guarantee the objectivity and comprehensiveness of information analysis at a professional level [17]. This approach focuses more on the behaviour and competencies of staff when dealing with risk and does not reveal the essence of all the attributes of establishing an organisation's risk culture.

I.O. Bashinska defines five elements of the risk management system at the enterprise: risk identification, analysis and prioritisation, risk minimisation and reporting, monitoring and revision, and risk management culture [18]. She sees the culture of risk management as creating an environment within the organisation that facilitates the identification, assessment and mitigation of risks and communicates openly about risks. However, this approach lacks the behavioural and managerial aspects of forming an enterprise's risk culture.

V.M. Moroz & S. A. Moroz note that the level of risk culture development in an organisation can be assessed through the awareness of its staff about the place and role of risk management in the management system, as well as

through the level of personnel engagement in risk management processes [19]. The authors refer the following to the elements of risk culture formation: formation of an internal information interactive database on the theory and practice of risk management; planning the budget for risk management measures; formation of a system of risk management effectiveness evaluation; planning and organization of staff training on the risk management programme; certification of risk management subjects. This list of attributes of risk culture formation is not exhaustive, the role and types of controls when dealing with risk, responsibility for risk decisions, availability and use of tools and practices of risk analysis and assessment, and how values of employees and values of the company as a whole are formed in the process of risk management are not considered.

O. Gerasimenko conducted a survey of Ukrainian enterprises on the specifics of forming a risk-based approach to management, which showed that this approach is determined by the attitude of management to risk identification, the application of risk management measures and the search for an optimal balance between profit maximisation and long-term sustainable development and protection of shareholders' rights [20]. Key to building an effective enterprise risk management system according to her investigation are: 31% – development and implementation of risk management policy/concept, 44% – implementation of risk management process in all functional units of the enterprise, 41% – active support from executive management [20]. This study prioritises the development and implementation of a core document regulating risk management coordination processes and practical actions to embed the approach across all business functions. However, despite the fact that risk and control are always around, formalised control procedures and the implementation of risk management regulations alone will not build a risk-oriented management and risk management culture in the enterprise. Employees should not only have management support but also be motivated and proactive in managing risks.

A review of scientific articles has shown that numerous authors consider various attributes for identifying the risk culture in an enterprise. Their findings provide a more complete systematic list of these attributes and highlight the extent to which they are used in the enterprise.

## Materials and Methods

The methodological basis of the study is a bibliographic analysis of the definition of the essence of risk management

culture, which made it possible to systematise approaches to defining the main value attributes of its formation.

Analysis and synthesis of the main attributes of the formation of a risk management culture at the enterprise allowed systematising them by types and parameters of their definition.

Matrix formalisation of the risk management culture at the enterprise was also carried out. The matrix model of formalisation of the risk management culture in an enterprise is a graphical and textual description of the types of risk cultures according to two selected parameters. As a result of the analysis of existing models of risk culture formation and the systematisation of attributes of risk culture formation, it was proposed to carry out matrix identification of risk culture according to the parameters “methods and control” and “level of personnel engagement”. Each parameter has two qualitative levels of definition. “Methods and control” are seen as a compromise between hard and soft controls in risk management. The “level of personnel engagement” in the company’s risk management system can be either high or low and determines how motivated, proactive and supported the company’s employees are by supervisors on risk management. This formalisation allowed identifying four types of risk management culture. As a result, it was possible to outline an approach to developing a risk management culture, by taking these important parameters into account, to summarise briefly and clearly how they affect the implementation of a company’s risk management activities when dealing with risk.

## Results and Discussion

### **Attributes of risk culture formation in the enterprise**

Culture is socially constructed, legitimised, maintained or changed by the people who work in the company; they shape and inherit already established patterns of managerial behaviour. The role of management is to create a risk-based management culture in the company in the most optimal way. It is important to understand and make adequate use of risk-culture formation factors, which can be systematised in the process of studying best practices.

C. Levy, E. Lamarre & J. Twining consider the structure of risk culture formation by four groups of factors (Table 1) [21]. They believe, these ten factors will identify whether a company’s risk culture is strong or weak. A study and evaluation of each factor will help to describe the characteristics, advantages and disadvantages of each organisation in the process of developing a risk culture.

**Table 1.** Risk culture framework

Group of factors	Element of risk culture analysis
Transparency of risk	Communication Tolerance Level of insight
Acknowledgement of risk	Confidence Challenge Openness
Responsiveness to risk	Level of care Speed of response
Respect for risk	Cooperation Adherence for rules

Source: [21]

However, with this approach, it is also important to understand the tools for identifying the strengths and weaknesses of the elements of risk culture analysis.

According to the concept of R. Smith-Bingham risk culture requires positioning a company according to two dimensions: structural and behavioural [22]. The structural dimension is based on the provisions of the enterprise risk management (ERM) framework, in particular the definition and communication of risk appetite, clear lines of responsibility for risk management, the definition of rules and procedures, the establishment of reporting forms and deadlines, appropriate training and agreed incentives for compensation and sanctions. The behavioural dimension refers to an individual employee's disposition, their respect for colleagues, customers, and suppliers, their level of engagement in risk management, and the company's values. The structural dimension aims to curb bad behaviour, while the behavioural dimension focuses on promoting good practices. On the one hand, companies try to standardise management business processes, but even pre-defined decision-making and risk handling rules must coexist alongside the process of personnel communication regarding

risk incidents, interpersonal discussions and self-expression. Thus, all personnel should be encouraged to self-select and use the best risk management practices appropriate to their circumstances, rather than being tasked with choosing the right behaviour among the approved norms and regulations.

The model developed by the Institute of Risk management (IRM) identifies eight aspects of risk culture, grouped into four themes, that are consistent with the organization's business model and used as a practical diagnostic tool for assessing the risk culture: risk leadership, how the organisation responds to bad news, risk management, the transparency of risk information, resource of the risk, risk skills, informing about risk decisions, rewarding compliance with the corresponding risk [23]. For each of the eight dimensions of risk culture, a four-level assessment mechanism was used, ranging from "good practice" to "particularly dangerous".

A review of the leading academics' perspectives on aspects of risk culture formation in the enterprise provided the basis for summarising and systematising its identification attributes, which, in turn, can be used to analyse and assess the state of its development in the organisation (Table 2).

**Table 2.** Attributes for identifying the risk culture in the enterprise

Risk culture formation attribute	Description	Definition parameters
Management support	Top management and senior management set an example of the right attitude to risk and compliance with the core values of the organisation, and have a clear understanding of the risk culture of their company	Top management and senior executives demonstrate a positive attitude towards risk management; promote, monitor and evaluate the risk culture; consider the impact of the risk culture on safety; make changes as necessary; and from budget to address risks
Risk management methodology	Interested parties develop and establish provisions of the risk management methodology and standards in functional business areas that do not contradict the unified corporate management policy and standards. The risk culture is reflected in the company's management rules	Compliance with the relevant rules, requirements and conditions (requirements of the country's legislation, advanced international standards on risk management, project management, business processes, etc., requirements of corporate risk management). Risk management methodology: standards, regulations, programmes, and methodological tools for identifying, analysing, evaluating, processing, and monitoring risks
Organisational structure	Risk-based management structure. Coordination of the board of directors, organisational units and employees on risk management. Risk management is represented by three levels of protection	Availability of a single integrated risk management infrastructure. The elements of a risk-based structure can be individual employees, services and separate parts of the management apparatus, and the interrelationships between those are maintained through established horizontal and vertical links
Responsibility	Employees understand the core values and approaches to risk management, are aware of the responsibility for their actions and disregard for risk and are able to fulfil their intended roles	The duties, rights and responsibilities of employees regarding risk management are set out in the job descriptions

Table 2, Continued

Risk culture formation attribute	Description	Definition parameters
Responding to macro-environment changes	Effective decisions are made in response to external challenges and promote an open and constructive dialogue	Continuous monitoring of external sources of risk, revision of goals and risks, adaptation and flexibility
Incentives and compensation	Risk management is embedded in economic incentives. Reward opportunities for effective risk management	At all levels, financial and non-financial incentives are used to perform risk management tasks that support core values and risk culture
Risk appetite	Risk appetite determines the opportunities and limitations of a company's operations by setting an acceptable level of targets, which allows for identifying problems at an early stage and developing the necessary changes in the process or control	Risk appetite is effectively transformed into operational limits. Decisions are consistent with the level of risk and established limits and restrictions. The limits are periodically revised. Risk appetite is formalised and documented
Communication	Risk culture is determined by the level of consistency of employees' views on culture and is implemented through communication. A partnership spirit among all employees of the company	There are mechanisms for sharing risk management information between structural elements of the organisational structure, which are supported through established horizontal and vertical relationships
Competence level	The risk management team should be equipped with key competencies: standards, risk quantification, risk psychology, risk management techniques, business specifics	Training of personnel on existing risk management tools
Monitoring and reporting	Risk management is monitored at all levels. Effective management reporting supports strategic risk analysis and decision-making	Development of control procedures that ensure that planned measures are properly implemented. Risk management reports are in the established form and frequency
Risk awareness	The attitude towards risk determined by the awareness of risk	Clear employee expectations for monitoring, reporting, and responding to risks. Establishing mechanisms for employees to understand and communicate their risk management concerns and to be aware of their role in minimising them and using them to their advantage

**Source:** summarised from [15-23]

Such a list of attributes of risk culture formation in an enterprise can be used to analyse its effectiveness and maturity.

### **Typification of risk culture of the enterprise**

The study of both risk culture and corporate culture is carried out to determine their impact on the result of the enterprise's activities.

Practical experience confirms how the risk management culture affects the company's performance. Thus, an interesting example is how the owners of the Porsche company, having found themselves in a crisis situation and on the verge of bankruptcy in 1992-1995, hired a new executive director, Wendelin Wiedeking. Wiedeking has made a real change in organisational culture and risk management culture thereby saving the company. This was done by transferring the management of the production of the classic German company to a team of Japanese managers, who not

only reorganised the business processes, but also radically changed the management style and staff attitudes towards change and risk, which had been extremely negative at the beginning of the reorganisation [24]. This was reflected in the fact that the company developed risk-based flexible management, according to which management supported the initiatives of employees to take risks that promised acceptable remuneration.

Another example is the international company IKEA, which has a strong brand and strong culture that has been formed since the company was founded in 1943. The main features of this culture are informality, equality, simplicity, respect, commitment to learning, opportunities for career building and development. Opening its international branches in different countries of the world, the company faced difficulties in rejecting the corporate culture of IKEA employees in some countries, for example, Germany, China and others. To sustain its brand and its culture around the

world, IKEA used so-called “culture bearers” – employees deployed directly from Sweden, who carried out communication, adaptation and training of new personnel in the company’s culture [23].

For millions, Kodak has been a leading brand trusted for over a century. Its bankruptcy in 2012 demonstrates a strategic failure to adapt to change and a missed opportunity to implement digital technologies that it invented in 1975 but failed to use. Kodak’s management created an organisational culture tied to rules, where making radical decisions was impossible. Kodak’s business model was based on being the world’s best film supplier, but it wasn’t set up to change customer expectations to recognise that its core competencies might become unnecessary over time. Kodak had a risk management system, excellent market analysis, and was able to analyse and assess the impact of digital technologies on its business. Its intelligence division predicted that early adoption of digital technologies will be slow, but will grow rapidly once critical mass is reached. But the style and complexity of management and the level of staff engagement in management demonstrated the inability to make complex

decisions. Kodak has lost its relevance in its core markets, and new competitors, unencumbered by history and with more innovative business models, have moved faster [23].

A review of the literature on the main concepts of risk culture in the enterprise showed that there are different approaches to defining their types. Understanding the culture and risk culture of management and other employees of the company allows to better understand its predictable and unpredictable consequences; assess the level of consistency of employees’ views on culture; identify subcultures that may cause higher or lower productivity in the group; understand the differences between traditional cultures during mergers or acquisitions; quickly orient new managers to the culture they join and help them determine the most effective way to manage employees; measure the degree of consistency between individual leadership styles and organisational culture to determine what impact the manager can have; develop the desired culture and report changes necessary for its implementation [25]. R. Smith-Bingham suggests defining the type of risk culture from the perspective of two parameters: “structure and management” and “behaviour and messages” (Table 3) [22].

**Table 3.** Typification of enterprise behaviour from a risk culture perspective

Structure and management	Behaviour and messages		
	Separation	Engagement	Proactivity
Strength	<b>PROHIBITION</b> There are too many rules, making it hard to achieve anything in the time available	<b>CONTROL</b> I follow the established rules and procedures, although they can sometimes be a little pathetic	<b>ADVANCE</b> I have a powerful risk platform for my work, and I’m constantly thinking about improving it
	<b>INDIFFERENCE</b> There is enough freedom in the risk guidance so that I can do my part as and when it suits me	<b>COMPLIANCE</b> I mostly adhere to existing requirements to avoid penalties for violating them	<b>SATISFACTION</b> I try to make good risk decisions and guide others on this, but the gaps in our standards are concerning
Limitations	<b>MISMATCH</b> The company is simply interested in getting the job done with as little bureaucracy as possible – which is fine with me	<b>QUESTIONS</b> There is not enough guidance, so I make judgements about what is best for me and what makes sense	<b>PROHIBITION</b> I do my best to anticipate risks, but I would appreciate more support from the firm and my colleagues

Source: [22]

Stable rules and business processes that are formed in a company to manage risk must co-exist together with efforts to improve interpersonal discussion and value-based behaviour. Over-reliance on structure and documentation can create an illusion of control and lead to some exhaustion. On the other hand, a focus on behaviour can lead to inefficiency and risk due to unclear guidelines, inconsistent practices, inconsistent communication between teams and differing behaviour standards.

Strengthening personal responsibility requires the coexistence of two aspects of management: rational and emotional, formal and informal, conscious and subconscious.

Personnel must be oriented towards performing responsibly, they should feel that they are choosing the right way to behave. To do this, companies must take a creative approach to staff recruitment opportunities, namely, develop training cycles to develop new risk behaviours, combining formal training with informal incentives. The art of forming desired behaviours is to be aware of subconscious decisions and then reintroduce new practices into subconscious behaviour.

Staff behaviour in accordance with two dimensions of risk culture the level of understanding of risks and the degree of protection from risks according to the concept of C. Turkoglu is shown in Table 4 [3].

**Table 4.** Typification of enterprise behaviour from a risk culture perspective

Degree of protection against risk	Risk understanding	
	Low level of risk understanding	High level of risk understanding
High risk protection	Risk-aversion	A reasonable attitude towards risk
Low risk protection	Ignoring risks	A carefree attitude towards risk

Source: [3]

The author of the concept Cengiz Turkoglu notes that these two dimensions should be taken into account when identifying a risk management culture [3]. On the one hand, excessive control of the risk management system in the form of established rules and standards can lead to confusion and excessive bureaucracy. On the other hand, focusing on behaviour can lead to inefficiency and reduced attention to risks due to unclear guidelines, inconsistent communication between teams, and differences in expected standards of behaviour. Personnel should be guided to use the best risk management solutions, procedures and tools (identification, assessment, risk impact measures) in certain circumstances, rather than expecting management to provide clear guidance on how to handle risk. This is especially true in situations where managers have to develop management tactics in circumstances where the usual methods of problem solving are not available.

The issue of risk control and perception is always acute for management [3]. Excessive control makes the control system inflexible and not adaptive to unpredictable changes, on the other hand, the expense of control may exceed the potential damage from risks [3]. Lack of control can make a company vulnerable to risks, especially when employees do not have sufficient skills in identifying, assessing, certifying risks, developing measures to mitigate them, and do not feel responsible for risks.

According to the Cultural Theory of Risk or simply Cultural Theory developed by the anthropologist M. Douglas and political scientist A. Wildavsky, each organisational culture of an enterprise understands and considers risks differently. Thus, according to this theory, there are four cultural ways of life or worldviews regarding risk: hierarchical, individualistic, egalitarian and fatalistic (Table 5) [26].

**Table 5.** Model for defining types of organisational culture according to the cultural theory of risk

Low	<b>Fatalist</b> Pragmatist The future is uncertain Therefore, strategic planning is not an advantage, and all that can be done is to influence changing circumstances	<b>Hierarchists</b> Manager The risk assessor needs help in determining how much risk can be accepted and how much reward is sufficient, balancing risk and reward
	High	<b>Individualist</b> Maximiser Risk creates opportunities to make a profit. Large risks can therefore be taken in the event of sufficient winnings resulting in a satisfactory reward
Level of flexibility of the management system	Low collectivism	High collectivism
	Degree of collectivism	

Source: [26]

Hierarchists seek to implement a system of risk management in the enterprise, which determines the risk appetite and establishes the relationship between risk and reward. Individualists focus on making a profit from risky activities. Egalitarians will prefer a policy of avoiding risks. Fatalists do not see the point in risk management, because it simply prevents them from responding to changes in circumstances [26].

The level of collectivism determines the degree of attachment of a person to the opinion of other members of the team. "High collectivism" means that a person puts the group's goals above their own, while "low collectivism" means that the person considers their own goals more important.

The level of flexibility of the management system refers to the degree of freedom an individual has in choosing their social role in the collective. "High level of flexibility" means that there are no restrictions on an individual's choice of social role, while "low level of flexibility" means that there are restrictions and people cannot freely choose with whom they want to cooperate [26].

An important aspect of cultural theory is that it is assumed that all four types of culture will be present in each organisation, one of which may be dominant for a certain period, but also change over time [26].

The cultural theory of risk also states that managers of an organisation can identify four cultures and their attitudes

to risk, and they can encourage each culture to interact with other cultures [27]. If all four voices are heard, they can be useful for understanding risks and allow managing them in the best possible way.

Understanding risk management is vital for effective enterprise management. It allows organisations to understand the opportunities and areas for improvement in their risk culture. M. Power, S. Ashby & T. Palermo consider an organic and engineering approach to the formation of a risk culture [28]. An organic approach involves an interactive risk management style, risk decisions are made within constraints, less third-party consultants are used, there is a chance to resist regulatory standardisation, and special

attention is paid to ethics and mission. The engineering approach is focused on centralisation in risk management, more formal approaches in risk management, often with the help of external consultants, this is a more conservative approach to risk management, which is closely consistent with regulatory risk appetites, in which official levers form incentives for behaviour change.

The identification and systematisation of attribute-characteristics of risk culture allowed the authors to propose an approach to formalising the risk culture of an enterprise along two important dimensions: “methods and controls” and “level of personnel engagement” (Table 6).

**Table 6.** Identifying a company's risk culture along the dimensions: “methods and control” and “level of personnel engagement”

Level of insight	Methods and control	
	Soft	Hard
Low	Spontaneity	Competition
High	Humanism	Methodicity

**Source:** compiled by the authors

“Methodologies and controls” means that the enterprise has a regulated methodological framework for risk management and that compliance with its use is monitored. This dimension compromises between hard and soft control, with or without compliance with existing risk management regulations, norms, procedures and programmes. The second dimension [29] of this model is the “level of personnel engagement” in the management system, which determines how supported the company's employees are by supervisors on risk management, understands the risks they are working with and how to manage them. It is measured by the extent to which risk management is reflected in economic incentives in line with risk appetite, the extent to which management supports staff risk management initiatives, and the quality and effectiveness of interaction with management, risk units and internal audits. The high level of personnel engagement demonstrates management's support for staff initiatives, and also that employees themselves understand the risks in their area of activity and are motivated to influence them. The low level of personnel engagement indicates that employees are not motivated to manage risks, do not fully understand the essence of risk, are creative in performing their management tasks and carry them out based on their own beliefs.

The result of this model is the identification of four types of risk management culture:

1. *Spontaneity*. For enterprises with this type of risk culture, it is important to get what they want without having to worry about processes and going into details; management is carried out without prior planning, it is a constant movement in search of effective forms of management, quick decision-making, the problem is resolved by adapting to the situation. There are no or poor quality risk management policies and rules. Formal nature of risk management and audit functions. Employees formally comply with rules and

agreements, so that they are comfortable in any situation, open to communication, adapt easily to the given circumstances and are constantly looking for new opportunities for self-realisation, always eager to get what they want. In such companies, an individual approach to risk management is valued and new experience is always welcome, but they do not like to go into details and, as a rule, make quick decisions, the emphasis in management is placed on informal communications and beliefs, management influences are chaotic and selective.

2. *Humanism*. Enterprises with this type of risk culture have risk management policies and rules, but they are not of high quality. Employees of the company usually put the interests of others first, actively participate in all communications that are organised at the enterprise, highly value relationships between people, and respect the opinion of others. Decisions take a long time and once the overall picture is clear, the decision-making process searches for similar problems and considers alternative methods of solving them. The main values of the company are public approval, personal freedom, mutual assistance, opportunities for personal growth, communication and persuasion.

3. *Methodical approach*. For businesses with this type of risk culture, precision is required and everything must be carefully prepared and organised. Risk culture permeates the organisation and determines the actions of employees. For employees, the fact of completing a task is a reward for their hard work; they are happy to follow detailed instructions, adhere to clear decision-making criteria, do not tolerate clutter, discuss details extensively, and fear unpleasant surprises and irresponsibility. The company's management compares reality with a certain ideal and looks for inconsistencies (where something is wrong or missing). The company's values are the availability and reliability of information, a logical orderly description of prescribed risk

management regulations and their observance by staff, the influence on personnel through communication and risk-oriented compensation.

4. *Competition*. Businesses with this type of risk culture value results, a professional approach to risk management, and staff training in the most effective risk management practices. Management wants to understand all the risks, creates procedures for controlling a risk event, and looks for the best solution for each task. Employees are inquisitive, learn a lot, appreciate the opportunity to test their skills, sometimes lose control of the situation, are highly motivated, good at time management, aim for success and place a high value on their reputation. In decision-making, much attention is given to analysing the situation, after which managerial action is taken. The values of the company are persuasion, the ability to sacrifice self-interest for future success, and the willingness to control risk management through work instructions.

By examining all four types of risk culture, it is possible to identify and understand the behavioural patterns and motivational factors of a company's employees. This will contribute to the most effective risk management and establish a balance between control and risk-based management, as well as between hard and soft management influences. The types described represent a generalisation. Every business is a complex system and any typification simplifies their individuality. Each enterprise may have signs of all four types of risk culture. One set of qualities may be dominant, while others may manifest themselves only from time to time when performing specific tasks or under the influence of external circumstances.

## Conclusions

Risk culture includes values, beliefs, understanding and knowledge in risk management, which are effectively distributed and applied in practice by employees of the enterprise at all levels of management.

There are many factors-attributes to identifying the risk culture in an enterprise. It is advisable to systematise and generalise the attributes of risk culture formation according to the organisation of the company's risk management process, which should include: determining the internal and external context of risks, identifying, assessing, attesting and analysing risks, monitoring, controlling and auditing risks, developing risk measures both in terms of

probability of their realisation and in terms of the significance of their consequences for the company's objectives, and interaction and advice to the team when dealing with risks. All this together defines the formation of risk-based management in the enterprise and also creates an organisational environment where values, beliefs, experiences, competencies and skills are understood, shared and put into practice by all employees in the organisation. This analysis allowed for systematisation of the eleven attributes of risk culture, defining each content and definition parameters.

Awareness of the type of risk culture that prevails in the company allows understanding the level of unity and consistency of opinions of all employees of the company in managing the company as a whole and in managing risks in particular. At the same time, managers can determine for themselves the most effective management practices in the team, incentives for engaging staff, and management styles. This will create a desirable risk culture that corresponds to the desired types of managerial behaviour. Risk culture should be systematically forecasted at all levels of the company's management. Ideally, it should become a sustainable feature of the company, rather than being based on the authority of individual executives. In organisations with a high level of risk culture, knowledge and competencies of risk management are always in demand. It is not only the set level of authority, responsibility and incentives that is important, but also the level of involvement of employees in management activities, with their value orientations defined.

A review of existing risk culture models and a systematic list of attributes for forming a risk culture made it possible to propose a model for identifying the type of risk culture of a company by two parameters: "methods and control" and "level of personnel engagement". This identified four types of company risk culture: "spontaneity", "humanism", "competition" and "methodicality". Determining these types helps to identify tensions and balance the individual values of employees, their initiative and level of support from the management on the one hand with the requirement to comply with prescribed regulations and risk management standards on the other.

Further research will be aimed at forming theoretical and methodological approaches to assessing the level of maturity of the risk culture in the company based on the identified attributes.

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## Атрибути формалізації ризик культури і її типізація на підприємстві

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**Анотація.** Формування культури управління ризиками потребує розуміння атрибутів формалізації ризик-культури і визначення її типу в залежності від сили дії тих чи інших параметрів її визначення. Метою дослідження є систематизація атрибутів формалізації ризик-культури і ідентифікація типу ризик-культури на підприємстві. Для досягнення поставленої мети було здійснено аналіз і синтез атрибутів формалізації ризик-культури на підприємстві із визначенням їх особливостей і параметрів визначення. Для ідентифікації типу ризик-культури на підприємстві було використано матричний підхід, відповідно до якого здійснено опис типу ризик-культури за двома параметрами: «методики і контроль» і «рівень залучення персоналу». Кожен з цих параметрів розглядається за двома якісними рівнями впливу. Параметр «методики і контроль» розглядається з точки зору існування на підприємстві жорсткого і м'якого контролю ризик-менеджменту. Параметр «рівень залучення персоналу» розглядається як високий і низький і свідчить про рівень вмотивованості персоналу і його підтримки керівництвом щодо управління ризиками. Унаслідок проведеної формалізації було визначено чотири типи ризик-культури компанії, які характеризують модель поведінки і мотиваційні чинники співробітників компанії залежно від сили використання регламентів, розуміння персоналом ризиків і методів управління ними. Практична цінність отриманих результатів полягає у тому, що кожен співробітник компанії буде розуміти свої повноваження і відповідальності стосовно своєї участі в системі ризик-менеджменту компанії, а керівники зможуть оцінити рівень узгодженості поглядів всіх співробітників з точки зору використання практик поводження з ризиком і визначити найкращі стилі і практики управління

**Ключові слова:** ризик-менеджмент, фактори ризиків, ризик-культура, культура управління ризиками, фактори ризиків, типізація ризик-культури

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