Article

Understanding Risk Culture in the Context of a Sustainable Project: A Preliminary Study

Joanna Moczydłowska [1], Joanna Sadkowska [2,*], Beata Żelazko [3], Carmen Nadia Ciocoiu [4] and Ewa Stawicka [5]

1 Department of Management, Economics and Finance, Faculty of Engineering Management, Bialystok University of Technology, 15-351 Bialystok, Poland; j.moczydlowska@pb.edu.pl
2 Faculty of Management, Department of Strategic Development, University of Gdansk, 80-309 Gdansk, Poland
3 Department of Market, Marketing and Quality, Collegium of Management and Finance, SGH Warsaw School of Economics, 02-554 Warsaw, Poland; bzelaz@sgh.waw.pl
4 Faculty of Management, Bucharest University of Economic Studies, 010374 București, Romania; nadia.ciocoiu@man.ase.ro
5 Management Institute, Warsaw University of Life Sciences, 02-787 Warsaw, Poland; ewa_stawicka@sggw.edu.pl
* Correspondence: joanna.sadkowska@ug.edu.pl

Abstract: Currently, due to the growing dynamics of changes that take place in the environment of organizations, managers have to intensify their efforts to implement 'solutions' which will not only increase the efficiency of particular business activities, but will also strengthen the potential of the organization in the area of its sustainable development. One of the elements from a 'wide set of potential solutions' is risk culture. In spite of a number of studies dedicated to explaining its essence, dimensions and influence, the phenomenon of risk culture has not yet been fully explored. While the previous research and analyses have tended to focus on defining its role and learning about its effects, especially in the financial sector, this study was directed at explaining risk culture in the specific organizational context of implementing sustainable projects in business. This paper analyzes the manifestations of risk culture in sustainable projects, along with its dimensions and key determinants. The authors used the single case study method. In order to expose the Central European context, an innovative Polish enterprise with sustainable project management practices, implementing projects with a high degree of risk, was selected. The results of the study indicate that the main source of risk in the studied projects was the customer. Risk culture in this business entity is characterized by perceiving the variability of customer expectations as an important project risk factor. At the same time, sustainable project management 'was accompanied' by a more mature risk culture. The study confirmed that the beneficial impact of the risk culture on the project itself and the enterprise takes place under conditions of the convergence of the risk culture with the organizational culture. Conflicts between project participants, as well as conflicts between the project implementation team and the internal environment of the enterprise, increase the probability that risk culture poses a threat not only to particular projects, but also to the company.

Keywords: sustainable project; project risk; risk culture; risk culture dimensions; determinants of risk culture

1. Introduction

Currently, due to the growing dynamics of changes which take place in the environment of organizations, managers have to intensify their efforts to implement 'solutions' which not only increase the efficiency of particular business activities but also strengthen the potential and capabilities of the organization. One of the elements in a 'wide set of potential solutions' is risk culture [1]. Analysis of a number of different definitions leads to the conclusion that risk culture is understood as a culture which refers to 'ethical values,

desired behaviors, and understanding of risk' in particular organizations [2] (citing after: [3]). Risk culture is seen not only as a significant element of organizational culture [3], but also as an important determinant of managerial decisions and employee behavior in the organization. At the same time, it is characterized by a high potential for influencing business processes. Risk culture can either stimulate a company's success in achieving its objectives or generate specific risks for the particular business entity.

In spite of a number of studies dedicated to explaining its essence, dimensions and influence, [4,5] the phenomenon of risk culture has not yet been fully explored. A research search of individual authors focused on different subtopics related to risk culture, including, among others, those related to: risk management system ([4], financial sector, banks and sports [6]. Some studies were set in the context of post-pandemic changes and challenges [5]. In other studies, authors investigated the relationship between risk culture and pro-environmental behavior [7]. A key challenge for risk culture research has been the development of the concept of sustainable development and the transfer of its values to entrepreneurship and business activities. One such field is project management. The transfer of sustainable development values to the field of project management practices [8–11] contributed to the formation and dissemination of the term "sustainable project" [12]. This term is a carrier of information about the economic, ecological and social value of a business venture implemented in the project formula. At the same time, it emphasizes that project results not only meet the economic criteria, but at the same time are socially and environmentally beneficial [13]. At the operational level the aforementioned has resulted in the intensification of efforts to take into account the expectations of various groups of company stakeholders [14]. Concurrently, one of the consequences of this process has been the occurrence of risk culture in a specific context of project implementation.

In both the Central European context and the Polish ground, the research problem of risk culture has so far been studied by few authors. Research in this area was conducted in the context of risk culture essence, determinants [15,16], risk appetite [17,18], risk culture awareness and markers [19–21], as well as the role of risk culture in the processes of risk management in banks [22,23].

While the previous research and analyses have tended to focus on defining its role and learning about its effects, especially in the financial sector, the objective of this study is to explain risk culture in the specific organizational context of project implementation in an enterprise. The following research question has been asked: what are the manifestations of project risk culture, its dimensions and key determinants? This study also explains the potential influence of project risk culture.

The authors used the single case study method. Case studies constitute an important research tool in the field of management. According to Siggelkow (2007), the existence of a phenomenon can largely be described by single case studies [24]. Despite the numerous criticisms brought to this research method, it was used significantly as a source of knowledge in different fields as an indirect source of experience, as an example to follow or of what can happen [25]. Dyer and Wilkins (1991) argue that single case studies are better than multiple cases because a single case study produces extra and better theory [26]. This method proves useful in situations where the topic creates reticence on the part of respondents when they have to answer some questions that refer to individual values, expectations and beliefs that result in risk culture in projects.

In order to expose the Central European context, an innovative Polish enterprise with an established position in both domestic and international market, implementing projects with a high degree of risk, was selected. The analysis included two investment projects, the specifics of which are presented in the methodology section of this paper.

This study contributes to the existing risk culture literature by accounting for the essential role of risk culture in the specific context of projects. It also aims at enriching practitioners' knowledge in this area. The knowledge referring to risk culture in projects in light of its potential influence, together with understating the particular risk culture, might significantly contribute to the final outcome of projects being implemented by a company. At the same time, managers' knowledge of risk culture specificity in particular projects might be of crucial importance in sustainable project management.

This paper is organized as follows. The first section presents the research problem of risk culture in the context of organizing work in a formula of projects. In this section, the essence of risk culture, its specifics in projects, as well as potential influence is presented. In the second section, the research methodology is described. The characteristics of the studied company and the projects being subject to analysis are included here as well. In the third section, the results of the study are provided. The paper ends with conclusions, limitations and implications for further research.

2. Literature Review

To achieve the objective of any business venture, two types of activities are of particular importance. First is the anticipation of problems that may disrupt the execution of planned activities in the future. Second is the prevention of the occurrence of difficulties and the reduction of their negative impacts on the enterprise [26,27]. In both of the areas indicated, the effectiveness of the activity depends to a significant degree on the scope and level of knowledge, as well as the skills of the people associated with the project; in other words, it depends on the competence of the originators, decision-makers, planners, managers and executors. Characterized by their ability to forecast events and early recognition of the sources of possible risks, they are the main determinants of the success or failure of the initiatives undertaken.

Concurrently, it has to be emphasized that in the last two decades the majority of businesses have switched to implementing complex business operations in a project formula where a project has been understood as an undertaking that is spread over time and is characterized by a certain degree of complexity, goal-orientation and commitment of resources [28,29].

The diffusion of projects and the importance of organizing the activity in a project-based form is demonstrated by numerous studies that led to the emergence of the concept of projectification launched by Miller in 1995 and defined by Schoper et al. (1988) as a share of project work in an organization [30].

The emergence and rapid spread of projectification in all fields is justified by the level of uncertainty faced by organizations and the pressure for efficiency and effectiveness in conditions of limited resources [31–34]. Projectification is present not only in project-oriented organizations and in all economic fields [35], but also in health [36,37], scientific research [38,39], culture and media [40] and public policies [41,42]. Over time, projectification has been treated both as a managerial approach and as a societal trend, human state and philosophical issue [43]. From the perspective of the managerial approach, the proliferation of projectification has led to methodological adaptations in project management to better face the challenges induced by the VUCA world. Adopting the VUCA paradigm in project management is useful for gathering valuable information on risk events and their impact, about project scope and communicating challenges to stakeholders [44]. The components of the VUCA paradigm (volatility, uncertainty, complexity and ambiguity) can be approached in any combination to propose solutions that can contribute to maintaining and increasing the organizational performance [45].

In a VUCA world, the factors that indirectly influence the choices and actions of individuals involved in a business project are increasing and becoming more complex. These are the circumstances under which the project is implemented, which include, among other things, the focus on the company's stakeholder groups, intra-organizational communication, intra-organizational conditions for interaction and cooperation, as well as

the mental and psychological attributes of the individuals involved (values and beliefs), which affect the style of decision-making or commitment to the planned tasks. This group also includes risk perception and attitudes toward risk. The factors indicated above determine how people react to potential dangers. In both theory and business practice, they are considered to be manifestations of the risk culture that characterizes a given enterprise [20,21]. This article is part of the trend of considering the psycho-sociological determinants of business decision-making and implementation, particularly the style of thinking and behavior related to risk accompanying human activity in business. This category is referred to as risk culture. It should be considered an interesting subject of study for several reasons. First, it determines the extent to which organizational values and principles are adopted and embodied by individuals involved in the implementation of investment projects. Second, it makes it possible to predict the reactions of these units in situations that were not anticipated beforehand and for which there are a lack of specific operational guidelines in the enterprise. Third, it has a significant impact on the reputation of the enterprise, particularly on the evaluation of its operations by customers.

The concept of risk culture most often appears in the finance literature, in studies on bank management [22,23]. It gained popularity due to a series of financial crises caused, among other things, by the inappropriate and often unethical behavior of managers [46]. Nowadays, the term also appears in works in management and quality sciences, especially in discussions of building an organization's resilience to crises [47], corporate strategy implementation [48], digital business transformation [49,50] and risk management [51,52]. In addition, it appears in analyses of factors shaping investment decisions and company performance [53] and in considerations of ethical principles for a selected profession [46]. Risk culture is also found to have direct influence on the process of decision making, as well as the preferences of particular participants [54].

Risk culture is an attribute and indicator of human capital. A definition formulated by the Australian Prudential Regulation Authority limits the content of the term risk culture to "*the norms and behavioral traditions of individuals and groups within an organization that determine how they identify, understand, discuss and respond to risks in relation to the risks the organization faces and the risks it takes*" [55]. According to this definition, an organization's risk culture is shaped by both formal elements (e.g., governance frameworks and structures and risk management procedures) and informal elements (such as the expectations and norms of the behavior of organizational members [55].

In turn, according to the popular, most quoted definition developed by the Institute of Risk Management, it means *the values, beliefs, knowledge, attitudes and understanding of risk shared by a group of people with a common purpose* [49]. Here, it should be emphasized that at the core of organizational risk culture is the perception of risk that characterizes individuals. This factor influences the formation of ethical principles that guide individuals in their actions. The behavior of individuals determines the organizational culture, which in turn affects the risk culture [56].

Despite the development of ISO 31000 standards that address risk management, a normative definition of risk culture has not been formulated. Its absence makes the study of this phenomenon a difficult challenge. Attempts to model risk culture have been made by, among others, consultants representing the world's largest consulting firms, such as Deloitte, Ernst & Young and The Institute of Risk Management. According to the model approach proposed by Ernst & Young, the study of risk culture should include: an analysis of the behaviors that affect risk and an analysis of the mechanism of shaping these behaviors [57]. The above methodology became the basis for the development of the approach that was used for the author's study, the results of which are presented later in the article. Similarly, Miller (2022) sees risk culture as a significant part of organizational culture [3].

The concept of project risk culture is closely related to the concept of the project itself. In "narrow" terms, project is understood and defined as a sequence of specific activities that are unique in nature, characterized by a certain degree of complexity. It is assumed that these activities are to be completed within a certain time and at a certain cost [58]. On the other hand, in a "broad" definition, a project is associated with a specific "experience" that has a unique character [29]. Consequently, project management involves, according to the Project Management Institute's [59,60] guidelines, the application of knowledge, skills, techniques and tools in order to achieve a project's stated goal.

The increasing role of risk culture in projects should be considered from the perspective of that fact that, currently, there is a growing number of projects which 'try to face the requirements of being sustainable'. They do not only deliver products according to the initial plan, but also try to contribute to the assumptions of sustainable development. As a consequence, project managers nowadays do not only have to face the challenge of managing projects in order to fulfill the criteria of scope, cost and time, but also try to manage projects in a sustainable way [8,61]. In this point it is worth citing Kivilä et al. [62], who highlight that sustainability is becoming increasingly important in the delivery of projects. As the cited authors indicated, the above factor is mainly related to the fact that the requirements of particular stakeholder groups are no longer restricted to economic aspects. Nowadays, they expect high ethics, as well as highly responsible approaches towards environmental and social issues [62]. In consequence, project management practices are expected to not only to be effective, but sustainable as well. Silvius and Schipper [63] (citing after: [61]) define sustainable project management as *planning, monitoring and controlling of project delivery and support processes, with consideration of the environmental, economic and social aspects of the life-cycle of the project's resources, processes, deliverables, and effects, aimed at realizing benefits for stakeholders, and performed in a transparent, fair and ethical way that included proactive stakeholder participation*. Analyzing the particular elements which have been included in the above definition, it has to be emphasized that risk approach is an integral part of building relationships with a particular stakeholder. From this point of view, the factor of risk culture might be of high significance in the process of supporting planning and implementing sustainable projects.

The analysis of the project management literature from the last decade allows us to notice that the phenomenon of risk culture itself, although not strongly highlighted, has been embedded in the cultural conditions of the project itself. Particular authors [64,65] have underlined the relationship between project and culture, with attention paid to the fact that every project implemented in the organization is "*a place where certain cultures meet*". These cultures are often of a different nature. These typically include the national cultures of the project team members and other stakeholders in the company, the organizational culture and professional cultures. Each project is also characterized by a specific, often distinct risk culture. A project's risk culture stems from the values, views, beliefs and expectations of those who participate in a project. It is expressed in their approach to project risks—their reactions and actions towards risks. As a consequence, the type and specificity of project risk culture influences not only project processes and project objectives, but it also has an indirect impact on the business entity as a whole. The outline of project risk culture sources and influences is depicted in Figure 1.

Project risk culture can be defined as a unique occurrence 'showing' how team members and other project stakeholders perceive and understand particular project risks. The above approach is based on and results from these individuals' values, expectations and beliefs [66]. It is also influenced by the understanding and knowledge these individuals have about particular project risks. Therefore, project risk culture might, and most probably will, have impact on how work regarding risk is organized and what the specificity of risk management strategy in a project will be. Mature project risk culture is characterized by the optimization of communication processes, as well as the optimum flow of risk information. Likewise, the ways of building project risk competences, knowledge and skills of those individuals who "work with risk" are upgraded.
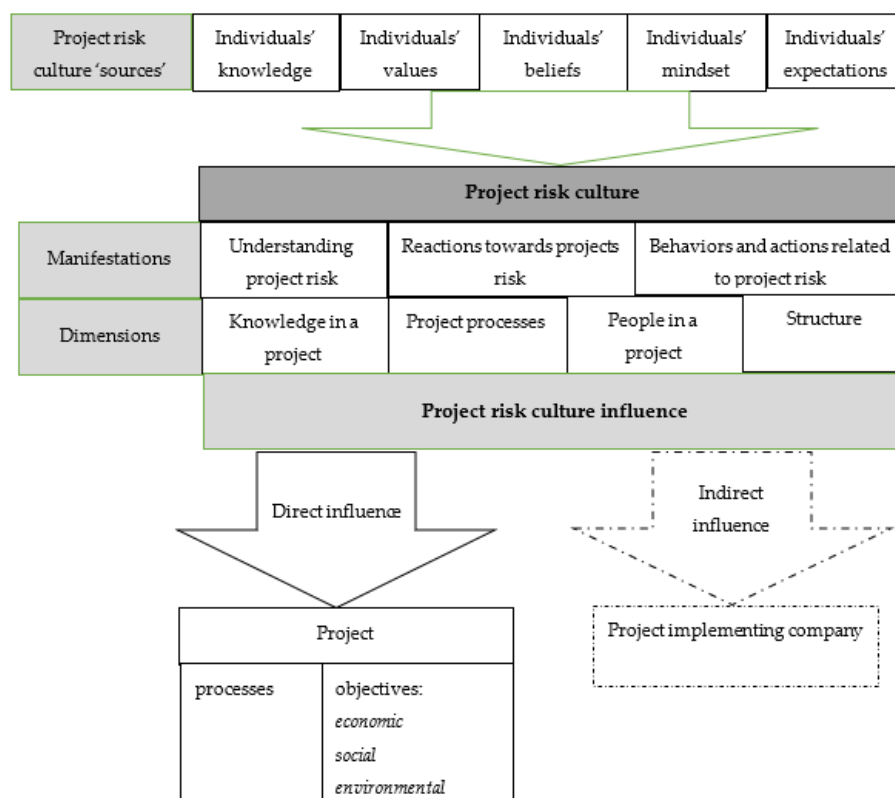
Figure 1. Project risk culture occurrence and the mechanism of influence.

3. Methodology

Due to the exploratory–descriptive nature of this study, the authors sought the research method that would provide insight and better understanding of the studied phenomenon. Due to the early stage of the studies related to risk culture in the context of project management, the objective of the research was mainly to seek answers to the formulated research questions [67]. Accordingly, the authors decided to use a single case study method. The selection of a case study method was dictated by the fact that the case study method is found to be appropriate in studies with a broad variety of existing factors and relationships [68]. The empirical material for analysis was obtained through the technique of individual in-depth, semi-structured interviews.

The main criterion for the selection of the enterprise was the objective of the study. It also conducts research and implementation activities. The selected company is characterized by the maturity in its life cycle (long presence and established position in the Polish market), as well as high business activity in both domestic and foreign markets. Its business activities are related to the manufacturing of radio communications equipment. The R&D activities were performed as well. The company manages complex business operations in a formula of projects. The particular projects are due to the specificity of business operations characterized by high innovativeness and level of risk. Its name was not indicated due to the request from the board of directors for anonymity.

In order to capture the peculiarities of the phenomenon of project risk culture, two projects implemented in the selected enterprise were studied. Project number 1 was an investment project carried out for a foreign client performing business activities in the Polish market. This project was of a highly innovative nature; its purpose was to implement a communications system at the client's facility. The project implementation period exceeded one year; its budget was more than PLN 100,000. It was a complex, high-risk project that finally turned out to be successful. It was implemented by a team of more than 10 members working traditionally, although in different locations. All the project team members represented the same nationality. The composition of the team changed

throughout the project. The people involved in the project worked together for a total of more than 1 year, but less than 5 years.

Project number 2 was also an investment project. It was a project of external nature, with high level of innovation and high risk, of similar duration and similar budget, implemented in different locations by a team of similar size and similar period of joint work of team members, and was completed successfully, but unlike project number 1 it was implemented for a Polish client. The project work was performed by a team working virtually. The team members in this case represented more than 1 nationality.

The data used in the case study were obtained by conducting individual in-depth, semi-structured interviews. Their characteristics are shown in Table 1.

Table 1. Characteristics of interviewees in the surveyed company.

Code of the Interviewed Person	1A	2A	3A
Role in the project	Project manager/team member	Project manager/team member	Team member
Experience in project work	Longer than 10 years	Longer than 10 years	Longer than 10 years
Experience in managing projects	Longer than 10 years	1–5 years	6–10 years
Age	41–60 years	41–60 years	31–40 years
Length of work in the studied company	Longer than 10 years	Longer than 10 years	Longer than 10 years

The selection of subjects for the study was based on the criteria outlined in the table above and aimed first at increasing the likelihood of obtaining the most reliable survey results, and second at getting the broadest possible research perspective.

4. Research Results and Discussion

In order to identify and describe project risk culture in the studied enterprise, the questions directed to the interviewees were formulated in a way that allowed the identification of the following risk culture manifestations: awareness of project risk, attitudes toward project risk and behaviors related to project risk (Table 2).

Table 2. Manifestations of project risk culture in light of the survey results.

Question Area	Category	Manifestations
I	Project risk awareness	Awareness of particular risks and their potential impact on the project
II	Attitude towards project risk	Project members' approach towards project risk Company's approach towards project risk Flexibility of the approach towards project risk Project environment as a risk generating factor
III	Behaviors related to project risk	Formalization of processes related to dealing with project risks Risk communication process Risk monitoring process Risk management process Risk analysis process

Source: own compilation based on surveys conducted.

Project risk culture is understood and identified primarily in relationship to individuals' attitudes towards project risk. Although the core of a project's risk culture is the approach of those who are directly involved in a project, it is also the approach to project risk of other, indirect project stakeholders in the enterprise, including, among others, the management and employees of other organizational units. The respondents emphasized the importance of this factor in terms of influencing the final outcome of a project, in the form of its success or failure. An interesting position was taken by one of the respondents, who pointed out the awareness of those who are involved in a given project. At the

same time, the "process aspect" of project risk culture was emphasized. Risk culture in a project, as understood by those interviewed, was closely related to processes such as risk management, risk communication and risk monitoring.

When analyzing project risk culture, it is also worth noting that, in the studied company, it is a relatively open culture, in which risk is treated not only as a threat, but also as an opportunity, including an opportunity concerning learning. This was illustrated in the following statement:

> *So colleagues had to learn this code (. . .) they had to get more involved, but the chance was also high that they learned new things and so based on this experience, the chance was taken and our application was created. There was a risk, actually it came true, but the chance was also there because a new product was created at our company, that is, an application for the system was created, ours, we no longer need the participation of this subcontractor. Participation in this project was also a chance that this would expand to further locations. It didn't come to fruition, but the chance to get to know and, as it were, in engineering terms, to make a new product was taken, well, because we have the product.*

The above aspect should be viewed positively, especially in the context of taking advantage of new circumstances that arise in connection with the implementation of particular projects.

While researching the particular project risk cultures, it is of significance to identify the affecting factors. Due to the fact that project risk culture is a complex and multifaceted phenomenon, the determinants will most probably differ depending on the project's specificity, as well as the conditions of the implementation process. The key project risk culture determinants in the studied enterprise are presented in Table 3.

Table 3. The key factors shaping a project's risk culture.

Group of Factors	Specification
Project specifics	Type of project The rank of the project and its importance to the company Degree of formalization of the project Size of the project
Project team	Composition of the project team, its internationalization Persons participating in the project Availability of people Qualifications and competences of people participating in the project
Project management	The influence of the project manager The influence of the steering committee
Project client	Customer requirements The influence of project client
Stakeholders in the project	The influence of stakeholders directly involved in the project The influence of stakeholders not directly involved in the project (e.g., workers from other departments)
Other factors	The influence of other stakeholders (e.g., business partners) Project management methods, techniques and tools

Source: own compilation based on surveys conducted.

The shape of the studied project risk culture—its manifestations and values—is determined by the impact of certain factors identified within the project itself and outside its structures. These include the type of project in terms of complexity and the degree of formalization of management processes. Respondents indicated that it is the rank of the project in the company's structures that determines the approach to risk.

If it's a strategic project or a project that brings in very big money, which is often inter-connected, then this management culture . . . . Risk culture is different, it is professional more. In smaller projects, basically this risk is not managed, nothing is done with this risk. Because we have projects even short, two-month, one-month projects, then there basically the risks are not identified, nothing is done with the risks.

The above observation is important, as it indicates that the risk culture in the projects implemented at the surveyed company adapts somehow to the client's requirements. The flexibility of the risk culture was also emphasized by those surveyed as its key value. On the one hand, the adaptation of risk culture to the requirements of the client as the key stakeholder is certainly a strong point, indicating the ability of a given culture to adapt to the requirements of the environment, which are crucial at a given time and which determine the final project outcome in terms of its success or failure. On the other hand, it may indicate that the culture itself does not have sufficiently developed core values to be able to "maintain" them in a given project. In such a situation, the culture adopts the values of the culture of the stakeholder, which is the project client. It is worth quoting here a statement made by one of the people interviewed.

If these requirements (of the client) are very rigidly formalized then the culture adjusts. That's the way it is with us, rather that's how it happens. Sometimes, of course, I myself, by my nature, try to impose our culture of running a project on the client. And I often succeed in doing so. But there are some projects where you can't and I don't know what you can introduce so-called soft elements or there such as we have here. Whereas yes, this skeleton is stiffened quite a bit. And the same applies to risk, yes, that is, if the client is sort of demanding a strong formalization of the whole project then when it comes to risks. Because it's also the case that the client doesn't know what risks we're defining, these are our risks. He is not always informed about it, right. Well I won't say about all the risks because he would get a heart attack so it's better that he doesn't know about it. On the other hand, well it very much depends on this external side yes.

Another important factor identified in the research is that the specifics of the project risk culture depend on the type of project being implemented. This element occurs in conjunction with the factor of the impact of the partner with whom the project is implemented, as well as the project manager and the team. This is well illustrated by the following respondent's statement.

It will have been ten years ago when we implemented an international project with (. . .). These were companies that have been in the market for a long time and both with risk management and project management they have worked for a long time, they have a lot of experience. We actually learned from them. In this project actually the risk management culture was very good.

The conducted research also showed that another factor that creates project risk culture is project risk management processes. Respondents indicated that in projects that are managed in an agile way, among other things, in the organization of daily team meetings, the approach to risk is more mature. It is reflected in the richer knowledge and awareness of project members. This issue is precisely reflected in the opinion of one of the interviewed respondents.

This is very well implemented, in my opinion, in agile projects, because there, at these daily review meetings, the so-called standards, there, every time this 15-min meeting has to be started by asking if there is a risk that we will not make it in this assumed time with the delivery of what we are supposed to deliver. So there the risk culture is very well described and the risk is very well managed. In my opinion, if he (the team member) is aware that if he can identify risks and do something about them, then it's easier to succeed, and thus he also succeeds, not just the organization. So, in my opinion this is a very key thing.

Both the essence and the manifestations of project risk culture are related to its dimensions. The dimensions of project risk culture can be treated as a kind of pillar on which the culture is based and built in both company (as the base organization) and the project (as the temporary organization), compared with the studies by Andersen [41,42]. The results of the study on the dimensions of project risk culture in the surveyed company are shown in Table 4.

Table 4. Dimensions of project risk culture.

Dimension	Specification
Knowledge of the project	Knowledge 'possessed' of the project, e.g., stored as lessons learned (repositories, project logs) Knowledge 'possessed' by the organization Knowledge possessed by a project's client Knowledge possessed by other projects' partners
Project processes	Risk management processes (identifying, analyzing, monitoring, communicating risks) Rewarding team members Improving competence and knowledge of risk Motivation and rewards in the project Communicating risk and the flow of risk information in the project Responsibility for project risk in the project team Selection of people to the project team and assignment to tasks
People in the project	Functioning of the team (stories, symbols, artifacts) Development of people in the project team Conflict in the project Trust in the project team
Structure	Influence of the project manager Impact of the organization's managers/owners

Source: own elaboration based on the survey.

In reference to the first dimension, the respondents emphasized the role of the project partner in stimulating learning processes and the accumulation of risk knowledge in the project. They also highlighted the aspect of knowledge from previous projects that is properly collected and used in the surveyed company. What is interesting is the fact that the respondents indicated that there is not enough time during the life cycle of particular projects to improve skills and competencies. Learning processes during trainings and conferences only take place between the realization of projects. The indicated theme carries interesting research conclusions related to a kind of intertwining of learning processes of people implementing projects in the company. The members of the team learn, so to speak, in two ways. On the one hand, team members improve their knowledge during trainings and workshops organized during the period when they are not participating in the project. On the other hand, a learning process takes place during the project, the source of which is other project stakeholders, in particular an experienced partner who participates in the implementation of a given project.

The next issue indicated by the respondents relates to the process of the flow of risk information and the related process of risk communication in the project. Although formal channels for risk communication have been established in the studied company, as the interviewees emphasized, informal conversations about risk are particularly valuable to them, providing them with valuable knowledge at the right time.

Within the project team, people who are committed to the tasks assigned to them are especially valued. Such people are particularly desirable in projects. It is not uncommon, as one of the interviewed project managers pointed out, for there to be *a snatching up of these employees' because no one wants to give back*. The situation indicated above points to a kind of inconsistency of the existing management system in the company, resulting in

limited resources. The source of such a situation may also be the organizational structure, the design of which did not take into account the fact that, in the enterprise, the work is organized both in a linear formula and project formula, to which people are recruited from individual departments.

There is also an interesting research thread on the project risk culture pillar of structure. This factor is related to the interaction of the project management and the management of the base organization, which is the studied company. The research shows that the owners do not control the project's approach to risk, nor do they make any, as the interviewees put it, *attempts to exert pressure*. The situation is different for management, whose presence is marked in the project through participation in the steering committee. Respondents agreed that management controls and influences the approach to risk, which project managers, even despite their separate opinions, must ultimately agree with.

Addressing the issue of project risk culture, an issue of particular importance is whether and how it influences the project and the organization as a whole. The impact of project risk culture in the context of risk creation and risk mitigation is included in the following Table 5.

Table 5. Project risk culture influence in light of the survey results.

Impact	Specification
Project risk culture as a source of risk	Insulting the customer by a member of the project team Lying to the client Failing to meet a deadline Giving a promise that will not be kept Leaving the team by a team member Being bought up by another company Failure to replace a team person
Project risk culture as a risk leveler	Lack of support for a team member in case of a problem Participation in the team of people from other organizational units Relations with clients Amicable resolution of the problem

Source: own elaboration based on the survey.

The key conclusion that can be drawn after analyzing the information included in Table 5 is that the project risk culture can not only mitigate project risk, but can generate it as well. In the company studied, examples were identified that confirm both types of impact.

The impact of culture as a source of risk is related to the attitudes and behaviors of the individuals involved in the project. Respondents who were surveyed indicated that, in their opinion, the biggest risk is not meeting the deadline, but dissatisfaction of the customer and loss of their trust. As one project manager stated: *Because failure to meet the deadline is something I can handle, but insulting the client is not*.

The above factor is linked in with the next two, which are failure to keep a promise and giving false information. The workers surveyed stressed that these are situations from which, as they put it, it *is very difficult to get out of*. Thus, it can be observed that risk culture expressed in human behavior, attitudes and attitudes in a project can itself pose a significant threat to the smooth implementation of a project. Since its 'core' is made up of people, possible attempts to control the culture are very difficult or even impossible. From the point of view of project objectives, it is therefore important to implement processes in the company that would build the desired attitudes of employees while minimizing the risks associated with their inadequate behavior.

At the same time, however, the project's risk culture can offset certain risks. In the company surveyed, it was emphasized that this culture, as defined by ensuring very good customer relations, saved projects on many occasions. Examples of situations given included the preparation of references, the provision of their strategic facilities to future

clients of the surveyed company, the preparation by the client of a presentation on the project and its presentation at an international conference.

> *I have to tell you, it's an amazing thing to have such a good relationship with clients to agree on strategic facilities for reference visits for other clients. this is something I win among other suppliers.*

A very important issue from the point of view of project management efficiency are situations when, despite the delay in project implementation, the client waived the collection of penalties stipulated in the contract. It is worth emphasizing here, however, that in the above situation the client received "added value" from the surveyed entity, for example, in the form of preparing additional functionality for the purchased solution.

5. Conclusions

Previous studies have shown that the connection between design and sustainability is underexamined, but it is evident. Sustainability, through its three dimensions, defines the criteria for the correct use of resources and for evaluating the results in terms of economic, social and environmental impact. In their turn, projects assume temporary efforts that, through the consumption of resources, lead to the achievement of beneficial objectives. The traditional approach to project management based on optimizing the ratio of resources versus time, cost and quality objectives to maximize stakeholder benefits does not consider the broader social and environmental issues that are sustainability challenges. In this context, a sustainable approach has been discussed more and more as a solution to the problems of the environment and society at large. At the project level, this approach contributes to the effective management of risks in an environment characterized by unprecedented uncertainty.

Risk culture might be 'used' as one of key indicators either for a sustainable organization or for a sustainable project. It highly depends on the ability of project managers to provide consistent risk information to be shared and openly discussed across the organization in order to achieve the proposed objectives.

In the company under study, the key attribute of project risk culture is its flexibility, expressed in the ability to adapt to the degree of formalization of particular projects and, above all, to the client's requirements. The project risk culture itself generates a certain risk for the project, in this case related to offending the client by a project team member. At the same time, however, it was discovered that the project risk culture interacts as a 'risk leveler', influencing the quality of the relationships that have been built with particular project clients. Consequently, it affects not only the project being implemented in a given period of time, but also subsequent projects. On the other hand, analyzing the studied phenomenon in the context of sub-culturalism, a kind of conflict was identified between the risk culture of the project and the cultures of other departments.

Moreover, in the studied business entity, a disturbance was identified in the relationship between the project understood as a temporary organization [69] and the project implementing organization understood, according to Andersen [69,70], as a base organization. The conflict is a culturally based one, where the project risk culture is "at odds" with the risk culture of other stakeholders, while it remains in line with the risk culture of the client, management and owners of the company. In addition to differing values, its cause is the need to give one's own resources (employees) to the ongoing projects. At the same time, this situation is not infrequently viewed negatively by department managers. The above creates the risk of conflict between the project manager and managers of other business units.

Thus, making an attempt at reassumption, project risk culture, despite the fact that it is often undiagnosed, is a phenomenon present in every project. Its potential influence is one hand related to leveling project risks. At the same time, however, project risk culture might itself generate particular risks. The results of the study of project risk culture which was conducted by the authors is in line with the results of other literature studies, where the researchers emphasize that *understanding culture is one of the most critical challenges today* (. . .

) [71]. In the case of the requirements that sustainable project management have to fulfill, understanding the essence and specificity of risk culture in a project might significantly increase the probability of completing particular projects in a way highly satisfactory to their economic, social and environmental stakeholders.

6. Limitations and Implications for Further Research

This study is not free of limitations. Though it represents the first step in the research direction of risk culture in the context of sustainability, much remains to be done. The first limitation is the context of the study and the number of the studied businesses. Due to the fact that the research was conducted in one company representing one country, the obtained results cannot be applied to other businesses with different economic and social characteristics. The second limitation is the type of the research survey that was employed by the authors. In further research, it would be interesting to broaden the studies of risk culture in sustainable projects by employing other research tools, including quantitative ones. Following this, it would be highly beneficial to broaden the scope of the research onto other project types, including grouping the studied projects into particular categories based on their characteristics. Finally, future studies would significantly benefit if companies from other countries were included.

The results of this study affirm the importance of the phenomenon of risk culture in the context of implementing projects. Frequently, project managers might not pay enough attention to the problem of cultural issues in projects. In this point, the sentence by P. Drucker *Culture eats strategy for breakfast* is worth citing (citing after Miller, 2022). Project managers should realize that risk culture is present in every project, and should neither be neglected nor omitted. This paper has tried to 'pave the way" to further research dedicated to studying the essence, dimensions and potential influence of risk culture in projects.

7. Declaration of Competing Interest

The authors declare that this work has not been influenced by any competing financial interests or personal relations with organizations or individuals.

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