STUDY ON RISK MANAGEMENT ANALYZED WITHIN A ROMANIAN COMPANY

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Abstract. *Based on the engagement of an integrated research process, both quantitatively and qualitatively, in the form of an in-depth case study on a Romanian company, the identification and assessment of the risks related to the management activity are identified and assessed. The evaluation method used to analyze the level of readiness of the organization in which the risk management study was conducted was the questionnaire. The results are evaluated, and the observations are noted where necessary. In terms of risk analysis methods, the intuitive experience of managers was first used. This has proven to be a partially unsatisfactory technique since they rely solely on their experience and specialization. Company experts were interviewed to identify a few risks specific to functional areas of activity. If the data collected were not sufficient, we estimated the specific parameters through the associations, as well as the detailed analysis of possible scenarios. In any field of economic activity, there is the issue of risk because its inevitable presence brings consequences that cannot always be predicted or anticipated in terms of consequences. The choice of the research topic in the field of risk management was justified on the one hand by the novelty of this field, by the increasing theoretical and applied concerns of the profile organizations, and on the other hand by the need to elaborate complex strategies. at the level of the organization, to ensure its protection against the influences of various factors.*

Keywords: *risk management; organization; risk analysis; SWOT; evaluation method.*

Introduction

Risk is an inherent component of all management activities, whether simpler or more complex. Therefore, the size or complexity of an activity is not always an appropriate measure of the degree of potential risk. But the dependence is direct in most cases. Complex activities are associated with higher risks. The leaders of our century, in the conditions of globalization, the rapid development of technology, and competition, carry out their activity, more and more, in conditions of uncertainty, their decisions are made under risk.

The problem of risk arises in any area of economic activity that has consequences that cannot always be predicted or predicted in terms of consequences. The risk arises from ignorance of future actions or events; almost every change involves some risk. Risk is pervasive - every activity or project must consider the occurrence of a risk situation. Risks are usually caused by unintentional situations or misconduct by those involved. In most cases, progress is made through such events, and one often learns from mistakes.

Through a review of the available literature, Leo (2019) seeks to analyze and evaluate machine learning techniques that have been investigated in connection with bank risk management, and to identify areas or problems identified in risk management. insufficient and possible areas for further research. Similar problems have been addressed by Araz et al., 2020; Samimi, 2020; Pournader et al., 2020 and Hansen, 2019).

Ullah (2020) 796, based on a comprehensive literature review of a systematically reviewed article, proposes a multi-layered risk management framework for sustainable smart city management based on technology, organization, and environment.

Wilumsen (2019) states that risk management is a widely accepted practice. Vigani and Kathage (2019) analyze the effects of risk management on farm productivity. The impact of different risk management strategies and portfolios at different risk levels on overall factor productivity was estimated using survey data from the French and Hungarian economies.

Fan and Stevenson (2018) worked on developing an overall definition and conceptual framework to review the existing literature on supply chain management; assess the use of the previous theory; and determine future research directions.

Other relevant research belongs to Zhou and Yang (2020); Kuhlicke et al. (2020); Nawaz et al. (2019); Anton and Nucu (2020); Buganová and Šimíčková (2019) and Belás et al. (2018).

Method used and results obtained

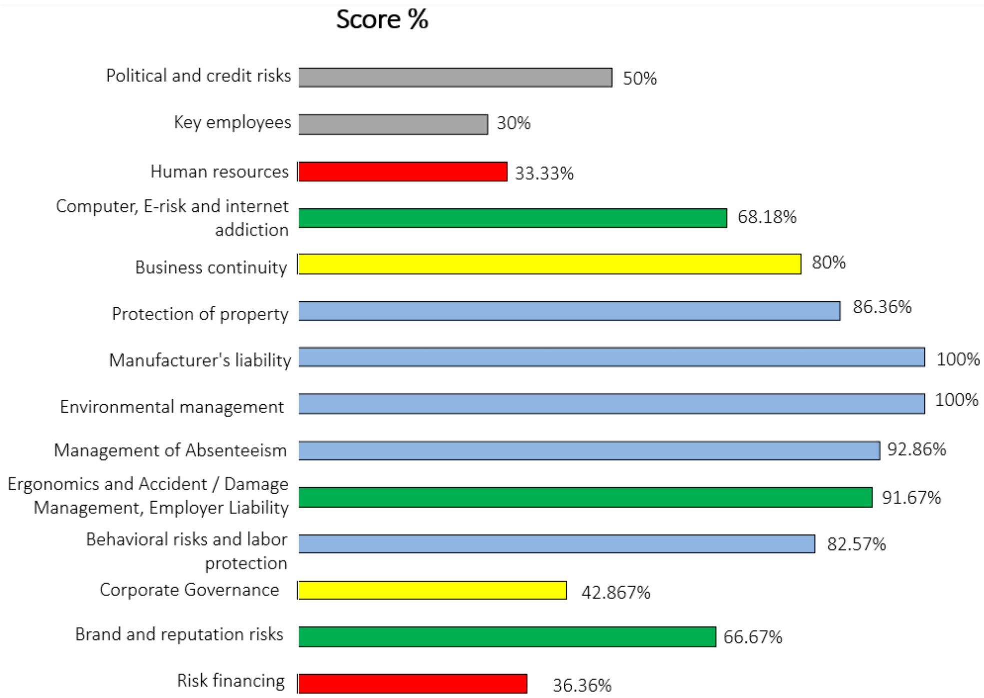
The assessment method used to analyze the level of preparedness in the organization conducting the risk management survey was the questionnaire. 110 questions were asked in trimodal form (with possible answers: yes / no / relatives) to key people (managers). The results are evaluated, and observations are recorded where deemed necessary.

Using an electronic program made it possible to obtain the percentage of compliance for each chapter, as well as the overall indicator. Different weights were assigned to each question in the questionnaire to calculate a risk score for each chapter based on the significance that was proper for every question in the analysis under consideration.

The level of compliance for each chapter is shown in Table 1. This table shows the chapter scores calculated from the responses to the questionnaire. Figure 1 shows the scores for all analyzed chapters.

Table 1. Results calculated for each chapter
(Source: personal contribution)

	Chapter	Score	Maximum result	Score %
I	Risk financing	400	1100	36%
II	Brand and reputation risks	800	1200	67%
III	Corporate Governance	300	700	43%
IV	Behavioral risks and occupational safety	1650	2000	83%
V	Ergonomics and Accident Management / Damage Employee Liability	550	600	92%
VI	Absenteeism Management	650	700	93%
VII	Environmental management	900	900	100%
VIII	Manufacturer's liability	400	400	100%
IX	Property Protection	950	1100	86%
X	Business continuity	400	500	80%
XI	Computer, E-risk, and internet addiction	750	1100	68%
XII	HR	200	600	33%
XIII	Key employees	300	1000	30%
XIV	Political and credit risks	200	400	50%



COLORS ASSIGNED TO EACH SECTION

Risk financing	
Brand and reputation risks	
Corporate Governance	
Behavioral risks and occupational safety	
Ergonomics and Accident Management / Damage Employee Liability	
Absenteeism Management	
Environmental management	
Manufacturer's liability	
Property Protection	
Business continuity	
Computer, E-risk and Internet addiction	
Human resources	
Key employees	
Political and credit risks	

Legend

0% - 25%	26% - 50%	51% - 75%	76% - 100%

Figure 1. Chapter scores calculated based on the questionnaire (Author's contribution)

Evaluation of the obtained results

Risk financing

The chapter score is 37%. This indicator is a rather low indicator, like a red flag indicating that risk financing is an issue that needs more attention from the management of the organization in which the study was conducted. This strategy does not have a longer time horizon, which will be weaker considering longer-term future risks.

Fluctuations in the prices and amounts of raw materials and currencies have a significant, but not very large, impact on the company's performance, increasing the risk of financing. At the same time, introducing the full cost of a risk system will overstate or underestimate the value attributed to long-term financial risks. The shortcomings are due to the lack of a dedicated risk management budget at the enterprise level.

Brand and reputation risk

The estimate obtained here is 67%. If a company's reputation is compromised, the consequences can be catastrophic due to loss of customer confidence, and insurance coverage for these types of risks is difficult. To date, the organization has not had any significant reputation loss issues. However, the operation of the business requires special attention, and a counterfactual analysis is required to assess the possible consequences. Conducting a formal financial assessment of a company's core brand, in addition to using different methods to measure brand performance, will increase chapter scores and by implication reduce reputational risk.

Corporate Governance

Here we have a value of 42.86%, primarily due to the lack of a risk management training program and an information system to identify major risks and their causes. Although the company manages relatively risk at a high management level, it does not have a complete and comprehensive application of the risk management process.

Long-term results can be achieved if the integrated risk management system implementation process is initiated and maintained. This enhances internal communication about significant risks and losses with potential economic implications and allows the company to align its goals with a shared vision that may be considered incomplete based on analysis by research organizations.

In an organization, management wants to maximize risk and ensure long-term profits. This goal is ultimately the responsibility of the CEO of the organization. CEOs are called "senior" risk managers because risk is essential to achieving this goal, and it is not uncommon for risk managers to report directly to the company's CEO.

Behavioral risks and occupational safety

Division score 82.50%. The score is high, but there are some significant risks involved. Behavioral risk analysis is extremely important because in recent years companies have been involved in restructuring without explicitly considering the impact on employee behavior.

Factors leading to behavioral risks that could affect the company's results were only partially identified and various methods were used to evaluate the effectiveness of the operational approach. Workplace risk factors and risk mitigation program awareness are as follows:

- Accident investigation and cause analysis – what is already done in the organization,
- Review of potential risks of workplace tasks partially done,
- Risk identification and elimination-partially done,
- Risk Probability and Severity Analysis-Not yet done, but part of the management program for the next period
- Suggestion.

Ergonomics and accident / damage management, employer liability

The main score is 91.67%, which is one of the highest scores ever achieved. Effective ergonomic programs should show improvements in manual operation (or documented improvements in other areas of ergonomics) and reduce exercise-related accidents. This helps reduce the number of work-related accidents such as device replacements and workplace changes.

The company creates ergonomic programs worldwide that cover research related to upper limb use, accident management / management, or ergonomic risk. There are also programs for accident rehabilitation and reemployment procedures, as well as regular reviews of employee health. One area that needs improvement is the proper handling of employee complaints. The importance of this section stems from the fact that the northeastern part of the organization is very difficult to find and maintain a skilled workforce due to the large-scale migration of the workforce to the EU's more developed countries.

Absenteeism management

The result of this category is 92.86%, which is more because the company has created programs to record different types of absences. However, the lack of a strategy to address the problem of absence due to health reasons leads to the existence of risk factors in this area which companies should eliminate. The existence of stress management and management programs in the organization are available to those who find it difficult and positive to reach out to Romanian companies.

Environmental management

The score in this category is 100%. It shows that environmental issues are important and a priority in the company's vision for sustainable development. The existence of a formal environmental policy governed by responsible management leads to a higher level of uncertainty and risks due to environmental accidents that occur during a company's business.

But in this case, the company's reputation is due to its lack of activity, which can seriously damage the natural environment. This aspect can be useful in accessing structural and harmonious ways to improve operations and increase economic competitiveness in the face of major environmental problems arising from EU integration.

Manufacturer's liability

Many of the points in this section reflect Romania's commitment to complying with European standards brought about by its accession to the European Union. Continuing this line reduces the risk in this area. However, the industry’s regulatory framework changes frequently, so company management should constantly monitor this section.

Property protection risk

After answering the 9 questions in this section, the score for this sector is 86.36%. Taking asset protection measures is important for business continuity. In this sense, real estate is considered socially important and has an advanced asset protection system that is regularly assessed and modeled for new risks in this critical area. The risks that society may face are:

- Earthquakes, floods, storms, lightning, etc. Fires, natural disasters, etc.
- The following intentional actions - theft and arson, terrorism-bomb threats, etc.
- Defective machinery and electronic devices,
- Accidents of employees and third parties such as visitors and contractors.

The risk of business discontinuity and counteracting it

Given the company's current business focus, a business continuity plan is required. The department score is 80% higher on average and requires special attention. Your business continuity plan should include emergency preparedness, crisis management methods, communication, and recovery strategies.

The main purpose of creating a business continuity plan is to minimize the impact of downtime and to determine the time required for recovery from a complex situation regardless of the cause of downtime.

The risk of computer, e-risk, and internet addiction

In this sense, the consent rate is 68.18%. Improvements in this index are considered necessary for the rapid expansion of the virtual marketing space for various products and services at the national and European levels. Focus more on IT risk assessment, training company employees to deal with emergencies in the area, selling products via the Internet, and implementing security measures to use these IT features.

Human resources

The estimate for this section is 33.33%. Below-average values require special attention from company managers in HR management. This section contains a variety of risks, the most important of which are events from the last operating period of the company, such as numerous layoffs, short-term operations, and organizational personnel-related proceedings.

For the person to continue working under optimal conditions, the need to compensate for such risks needs to be analyzed as soon as possible.

Key employees

Department consent rate 30%. According to the Human Resources Department, even if the original person can be identified, there is no strategy to lose the original person. Other issues addressed by key employee concerns are related to financing alternative employment. You need to consider the resources you need to hunt a boy. If you lose an important person and need to hire a new employee, you must have access to resources to pay higher salaries.

Political and credit risk

The rating for this category was set at 50%. This is one of the company’s main risks, such as counterparty risk, primarily because the company is struggling to generate revenue. Credit insurance is not enough to cover too much risk in this case and more basic and comprehensive measures are needed to reduce the existing risks. Export problems in recent years have helped reduce valuations.

Analysis of the risks identified within the organization

Risk assessment by the probability of occurrence and impact

The results of the risk assessment process are summarized in the risk matrix below. The next step is to assess risk by estimating two dimensions:

a) *Impact:* It measures the impact of each risk and indicates the potential size of the loss. Values are given on a scale of 1 (negligible effect) to 4 (very high effect).
b) *This determines the probability of an event on a scale of 0 to 1.*

In the risk assessment process, risks fall into four categories.

a) Strategic risks: These risks affect a company's value and can lead to bankruptcy, recession, or decline due to the company's inability to adapt to the ever-changing competitive environment. Customer priorities, threats to traditional or new players, changing brand awareness, changing access to financial capital, problems with access to human capital, new technological developments, and global economic and geopolitical movements.
b) Financial risk: These risks are related to interest rate, exchange rate, raw materials, stock and other asset fluctuations, credit risk, and liquidity risk.
c) Operational risks: key personnel and successor development, board formation and management, human and commercial resources, information technology systems, accounting, audit and management systems, non-compliance, design errors, performance, and procurement.
d) Dangerous risks: Risks of natural events, physical damage to assets, employee behavior, legally responsible events, product, and integrity recalls, and business interruptions that cause a decline in non-financial assets.

Assessment of risk exposure using the risk matrix and the risk factor

To effectively assess and manage risks, firms must look at the risks as a whole and learn to mitigate and / or finance internal and external risks. Different methods are used for their quantitative assessment depending on the nature of the risk. In general, data estimates regarding risk intensity and probability were based on expert opinion, but due to insufficient data collection, specific parameters were assessed through a detailed analysis of potential association situations.

However, risk management is a predictable strategy, not an accurate science and its quality improves with time and capital investment. Since there is no risk management background after the introduction of integrated systems, it is recommended to invest in future risk management information systems and involves employees in the risk management process to improve the risk management process. The effectiveness of this activity. The first step identifies a total of 35 risks.

The risk assessment table contains the results of the risk assessment and the impact assessment identified from the study and the treatment of the information obtained from the documents provided by the company's management (Table 2).

Table 2. Risk assessment table (Source: personal contribution)

No	The name of the risk	Risk description	The type of risk	Impact [1-4]	Probability [0-1]	Risk factor	Priority
1	Risk of insurance premiums	Agreed insurance does not cover unconventional risks.	Economic	1	0.90	0.90	
2	Strategy risk	Unexpected risks in the general strategy of the company due to lack of risk strategy	Strategic	2	0.80	1.60	
3	The total cost of risk	Failure to allocate the required amount for prevention of expected risks due to failure to take overall risk expenditure measures.	Economic	1	0.90	0.45	
4	Risk of major price fluctuations	Significant changes in the price and quantity of materials used in the operation affect the company	Economic	1	0.50	0.50	
5	Brand risk	Consumer confidence in the company's	Strategic	3	0.30	0.90	

No	The name of the risk	Risk description	The type of risk	Impact [1-4]	Probability [0-1]	Risk factor	Priority
		brand or market recognition has waned					
6	Treasury risk	Failure to recover timely due customer	Economic	2	0.70	1.40	
7	Risk management	Insufficient information on risk at middle and upper management level	Strategic	1	0.50	0.50	
8	Risks related to labor protection	Inadequate active participation of staff in occupational safety and health activities	Operational	2	0.50	1.00	
9	Risk of litigation	The company works in court for a variety of reasons	Strategic	2	0.50	1.00	
10	Equipment risk	Wrong risk behavior	Operational	2	0.40	0.80	
11	Economic climate risk	Risks due to local, national, and European economic climate change	Economic	2	0.60	1.20	
12	Credit risk	Risks due to large financial changes at the macroeconomic level	Economic	2	0.35	0.70	
13	The risk of internal communication	Problems with staff due to their non-involvement in the communication program	Operational	4	0.10	0.40	
14	Business continuity risk	Suppliers are likely to lose key suppliers due to their relatively small portfolio	Operational	4	0.55	2.20	
15	Business continuity plan risk	Extreme risk due to non-existence of alternative business plan	Operational	2	0.65	1.30	
16	IT risk	Risks due to inadequate planning for data recovery in digital media	Operational	2	0.50	1.00	

No	The name of the risk	Risk description	The type of risk	Impact [1-4]	Probability [0-1]	Risk factor	Priority
		and computer security					
17	Crisis communication plan	Inadequate control at the company level of ways in which crises occur at different levels	Operational	3	0.15	0.45	
18	Occupational safety risk	Inadequate reasoning for workplace safety planning	Operational	3	0.50	1.50	
19	Employee benefit risk	Risk due to inadequate fairness of ways to provide rewards and benefits to employees	Operational	3	0.85	2.55	
20	The risk of absenteeism	The risk of a high absence at the company level	Operational	3	0.10	0.30	
21	The risk of ergonomic policy	Insufficient sound in a work ergonomics plan; Poor design or implementation of health risk assessment and	Operational	2	0.10	0.20	
22	Behavioral risk al	Intentional loss of company by employees (theft, non-compliance, sabotage)	Operational	2	0.35	0.70	
23	Environmental risk	Activities with impact on the environment	Operational	2	0.05	0.10	
24	E-risks	Insufficient evidence for an analysis of the operation of the Internet	Operational	2	0.80	1.60	
25	Risk financing	Long-term risk Risk arising from lack of financing strategy	Strategic	2	0.50	1	
26	Risk of handling toxic substances	Risks when handling and controlling toxic and hazardous substances	Operational	2	0.05	0.10	
27	Risk of employment / dismissal procedures	Risks due to unreasonable and complete recruitment and	Operational	2	0.05	0.10	

No	The name of the risk	Risk description	The type of risk	Impact [1-4]	Probability [0-1]	Risk factor	Priority
		/ or dismissal procedures					
28	The risk of key employees	Risk of concentrating key activities in the hands of a small group of employees with inadequate preparation for their successor	Operational	3	0.90	2.70	
29	Property risk	Risk due to possible litigation regarding company ownership	Operational	2	0.05	0.10	
30	Risk of accidents	Investigate occupational accidents without considering the ergonomic reasons involved	Operational	2	0.10	0.20	
31	Risk of appeal proceedings	Risk due to inadequate organization of complaint analysis methods from employees and / or customers	Operational	2	0.40	0.80	
32	Natural hazards	Risks arising from the complete failure to prepare a response plan in case of danger	Hazard	3	0.10	0.30	
33	Fire risk	Risks due to inadequate systematic training in fire prevention	Hazard	4	0.05	0.20	
34	Risk of liability of the manufacturer	Risk due to inadequate preparation of assessment of manufacturer's liability towards its customers	Economic	4	0.10	0.40	
35	Competition risk	Risk due to intense competition and lack of continuous monitoring of	Strategic	1	0.50	0.50	

No	The name of the risk	Risk description	The type of risk	Impact [1-4]	Probability [0-1]	Risk factor	Priority
		competitors' development					
Minor risk			Medium risk			Severe risk	

The comparative risk structure is used for the probability and intensity of the risk matrix.

The risk matrix consists of three separate fields, and the risk priorities are determined according to the data shown in the table above. Table 3 shows the resulting risk matrix for the organization.

Table 3. Risk matrix
(Source: personal contribution)

Impact	4	13, 33, 34	14		
	3	17, 20, 32	5, 18	19, 28	
	2	21, 23, 25, 26, 27, 29,30	8, 9, 10, 12, 16, 22, 31	6, 11, 15	2, 24
	1		4, 7, 35		1, 3
		[0-0.25]	[0.26-0.5]	[0.5-0.75]	[0.76-1]
		Probability			

Red zone risks can create social challenges and are significant and need to be addressed first. On the other hand, the risk in the opposite corner (green zone) is the lowest priority.

Most are in the green zone, as you can see in the risk matrix. This is confirmed by the overall score of the company. This indicates that the company's risk exposure is relatively small.

Conclusions

Risk identification involves documenting conditions and events related to achieving an organization's goals or areas of competitive advantage. The information needed to identify the risk was obtained as follows:

- A study of documents produced by organizations, strategies, and plans, results of organizations and competitors, national and regional policy documents, and macroeconomic forecasts for national and industrial development. The status of the most important documents, annual reports, financial and accounting documents, and fixed assets of the companies surveyed. Explanatory materials, technical documentation, security insurance publications, contract terms, and organizational insurance records for company-operated facilities.
- Site visits or discussions with representatives of the analyzed organization's management.

Filling out a standard questionnaire to assess the degree of risk management implementation and filling out by those involved in performing the activity is a reliability factor due to the complexity and processing of the information received. It contains 110 questions divided into 14 categories (possible answers: yes / no / relatively).

The "Environmental Management" and "Producer Responsibility" sections are the highest (100%), and the "Major Employees" and "Personnel" sections are the lowest (30% and 33%, respectively).

According to the analysis of the questionnaire, the overall score calculated by the weighted average of the importance given to each section by the evaluator is 67.7%, which is a good value indicating the above-average organizational level. crisis management. To society

For the 14 categories analyzed, the most appropriate ways to reduce threats and improve opportunities were determined.

Based on surveys and interviews with key players, 35 risks were identified and categorized into four categories: finance, strategy, operations, and risk.

Use the 1 to 4 and 0 to 1 probability scales for risk analysis and evaluation of event probabilities and results. Once you have identified two aspects of risk, start calculating risk factors and include them in your risk matrix to determine mild, moderate, or severe risk.

The manager's intuitive experience was used for risk analysis techniques for the first time. This turned out to be an inadequate method, as it relied solely on their own experience and expertise in part. We interviewed company experts to identify some of the specific risks of each functional business. If the data collected was insufficient, certain parameters were evaluated through a detailed analysis of possible scenarios.

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