

Chapter IV

Developing a Risk Management Framework and Risk Assessment for Non-profit Organizations: A Case Study

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Abstract

Risks in the rapidly increasing global business environment began to receive more attention among both researchers and practitioners illuminating the delicate balance between enterprise efficiencies and risk economies. However, Risk Management, in recent years, are becoming more complex to analyze and more challenging to manage and optimize.

Besides that, risk and uncertainty concept have always been a significant concern not only for private sectors and public sectors but also for non-profit organizations (NPOs) sector. In this chapter, the potential risks and their drivers are identified, assessed and ranked for a wide spread and most effective for a non-profit organization which aims to bring together native and foreign students for creating a bridge of humanity and education. After investigating the key control measures of major sources of risk, risk management processes and strategies were developed. To provide analytical results, Analytic Hierarchy Process (AHP) used by utilizing the questionnaire technique.

4.1 Introduction

With the rapid change in today's environment, risk management became more popular among NPOs with intent to increase the efficiency and besides to mitigate the negative effects of disturbances. Not only business environment and science always attached particular importance to risk issue, but also the concept of NPOs increased its popularity in recent years due to complexity and increase in the amount of global interactions.

America Institute of Certified Public Accountants (2011) claims that having significant risk awareness results in better performance while governing an organization as a whole. In other words, executive staffs who realize that organizations, as well as non-profit ones,

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must assume that the importance of risk can go further their mission goals or objectives being more informed about the types of risks and their effects.

Young (2009) points out the problem clearly by saying that non-profit organizations did not take account of view of risk management into consideration adequately. He also puts forward in his comprehensive study that non-profit organizations are not able to take consequential decisions in a strategic level, even though they appear to take part in some studies concerned with stopping or reducing the negative effects of risks. Besides, Trivunovic et al., (2011) argue that until now, many international benefactors and the NPOs did not apply a comprehensive method to overcome an expected or unexpected corruption of risks. That is why; this study could be proposed as a structural framework in order to ensure that it is beneficial for practitioners or executive staffs of NPO throughout the implementation of the all steps of risk management.

This chapter is organized in the following way. This first section gives a brief overview of the recent history of risk management for NPOs and the second part deals with the potential risks and their drivers in the NPOs are identified. Thirdly, the determined potential risks are scored, assessed and ranked in terms of four objectives which are financial loss, growth, image and profit in order to find the most effective risks. Lastly, the suitable and applicable mitigation-methods are developed for handling the negative consequences of selected risk.

4.2 Literature Review

There is a large volume of published studies describing the risk management and the role of risk management even in the area of both business and science. So far, however, there were little discussions about application of risk management approach for NPOs. An extensive study in this field was provided by (Jackson, 2006). Although his book called Risk Management and Contingency Planning includes comprehensive theoretical explanations about risk management for NPOs and planning methods, there are no available empirical case studies.

Mohammed (2007) identifies potential risks and the ways of managing risks for an NPO that provides health and services for mental, intellectual and physical disability individuals. Young (2009) offers a conceptual framework by identifying the kinds of decisions in order to help non-profit organizations when they need to manage their risks in a strategic level.

Wilson-Grau (2004) implements risk management steps in a strategic level in order to help NPOs to achieve their mission or long term purposes. Gaudenzi et al., (2006) provides a method to evaluate supply chain risks by using Analytical Hierarchy Process (AHP) model. Chen (2010) provides mathematical model for non-profit organizations to compute and compare dysfunction situations. Trivunovic et al., (2011) prepare a comprehensive approach for international donor agencies or international NPOs to manage risks which may result in corruption. Matan et al., (2011) analyze the types of risk which can more likely be seen in non-profit community. Although they support their paper with a case study, the evaluation and assessment steps are not explained comprehensively. Pehlivanli (2012) deals with enterprise risk management which gives a chance to non-profit

organization leaders to ensure managing both external and internal risks across the organization. Carter, et al., (2013) compose a legal risk management checklist for the directors or executive staff of non-profit organizations who desire to take account all required actions in the organization and to protect organization operations as the risks occur.

4.3 Risk Management for NPOs

Sitkin et al., (1992) define risk as “the extent to which there is hesitation whether potentially desired or insignificant/unwanted outcomes of decision will be realized”. In other respects, Ritchie et al., (2007) formulate a principle of risk to assess (1) the probability of occurrence of certain outcomes (2) severity from the occurrence of event (3) the ability to detect the risk. It is put together in the notation below.

$$\text{Risk} = \text{Likelihood} \times \text{Severity} \times \text{Detection} \quad (1)$$

Boas (2012) defines risk for NPOs as anything that may have a negative impact on achieving your NPO’s mission, goals, objectives and strategies if it becomes reality.

Risk Management is defined as “an organized process to identify what can go wrong, to quantify and assess associated risks, and to implement/control the appropriate approach for preventing or handling each risk identified” (INCOSE, 2002). Matan et al., (2011) have provided an extensive definition of Risk Management: “the process that is adopted to plan for the possibility that events may cause harm to an organization, focusing specifically on risk associated with board members and volunteers, staff, programs and events, services offered, operations, technology and financial management”. Wilson Grau (2003) claims that in this volatile environment, risk management is a tool for maximizing an NPO’s opportunities and minimizing the dangers to success. It enables NPOs’ decision-makers to think strategically all the time.

The key aspects of risk management can be listed under four topics, which are identifying and categorizing the risks, evaluating the available risks, deciding how to mitigate them and applying the necessary action.

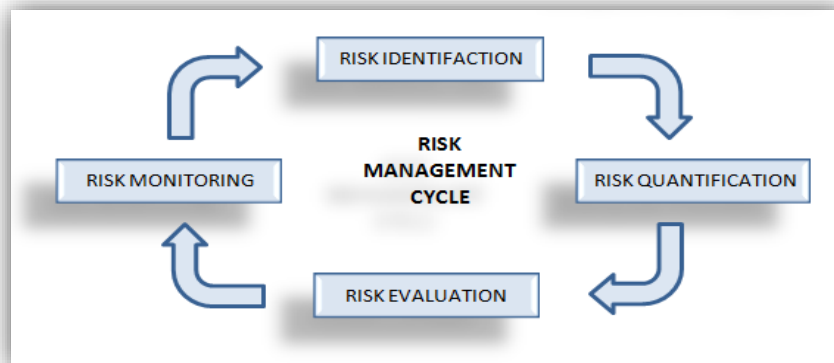


Figure 1 : Risk Management Steps

The risk management process is shown in Figure 1 which can be repeated until the risks are kept inside the acceptable corridors. These steps are implemented incrementally within the scope of the study.

4.4 Case Studies

4.4.1 Risk Identification

Risk identification is the phase in which the risks are determined. All possible risks are collected in a list, then not only identification of risk conducted but also recognition the source or drivers of potential risks are carried out in this step.

A significant amount of literature published on categorization of possible risks or changes, in other words change drivers. An example of this kind of literature is carried out by Christopher and Pack (2004) who divide source of changes into five classes: environment, supply, demand, control and process. On the other hand, Tang et al., (2008) diversify the classes by adding political, social and behavioural sources of risk. Some other studies attempted to classify the source of change as well, for example Chopra et al., (2004), Harper (2012), Park (2011). Boas (2012) separate possible risks into three levels 1) Risks could be seen in the macro environment such as governmental legislation and regulations or shifting lifestyle, 2) Risks emerge in micro environment level and interruption of energy or required resources and cancelling donation or financial aid can be given as the example 3) Risks happen inside the organization and effect directly as departure of staff members with high qualifications or poor decision making etc. Matan et al., (2011) list risk as follows: Volunteer risk, Financial Risk, Staffing Risk, Restricted Grants Risk, Reputation Risk.

To identify supply chain risks in our case study, the possible risks are identified through a series of brainstorming sessions with officials at executive level of the firm with guidance from related literature in the background. Within these sessions, six potential risk types are determined and listed with examples as follows.

1. Financial Risk (Economic crisis, insufficient donation)
2. Other Associations Risk (Negative competition, lack of communication)
3. Own Association Risk (Rapid growth, low performance due to high bureaucracy)
4. Student Risk (Lack of realizing the real necessary, inefficient student performance)
5. Executive Staff Risk (Management deficiency, overloading)
6. Activity Risk (Ineffective and non-systematic working, unsuitable meeting place)
7. Political Risk (Political instability, legislations)
8. Intention and Behaviour Risk (Different aim and purpose)

The identified risks are then put into a hierarchical structure as shown in Figure 2. The structure of the hierarchy consists of three levels. While the top level represents the essential classification of available risks in terms of different risk properties. It consists of four main classes, which are namely risk source, risk expectation, risk duration and risk focus. The second level consists of two sub-classes of each fundamental risk features, as

external and internal, expected and unexpected, long term and short term, organizational and personal. Finally, the bottom level includes one example for each subclass which is chosen from the case study.

In order to provide a better understanding of the above figure, the class of ‘Risk Source’ is explained in detail. Internal risks mean disruptions or dysfunctions originated from problems inside the bounds of NPOs such as electricity breakdowns or information technologies related problems. Within the concept of the case study, students which are the reason for establishment of the NPO could be accepted as an internal risk. External risks take notice of environmental causes that can implicitly or explicitly lead to disturbances within the NPO. Political risk, legislation or regulations can be given an example for external risk of our case. The probability of occurrence for internal supply chain risks is grater compared to external supply chain risk. On the other hand, external supply chain risks are more dangerous than internal supply chain risks.

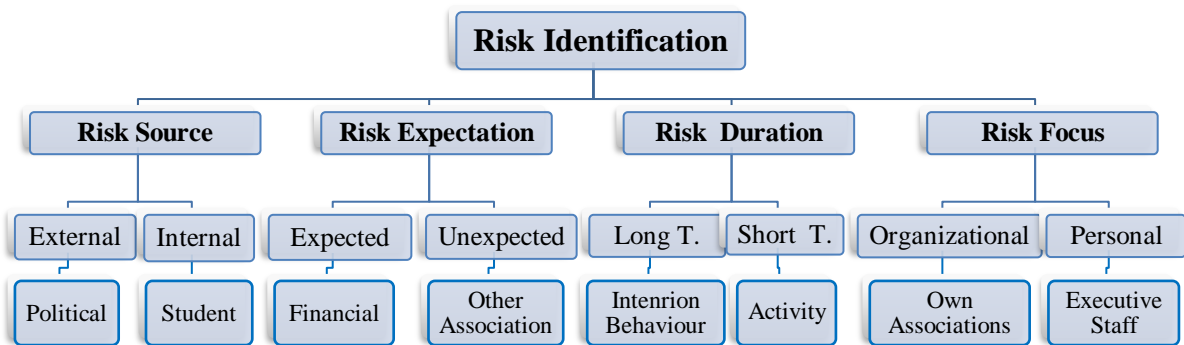


Figure 2: Structure of potential risks for NPO

4.4.2 Risk Quantification

Risk Quantification phase comes after the risks analyses in order to identify the prioritization of the risks affect. The well-known method is to measure the likelihood and the expected impact on the defined system. In other words, this assessment is essentially dealing with two main questions; first, “how likely a risk is” (i.e., the frequency of risk) and second, “how terrible risk can be” (i.e., severity of risk). Within the concept of the previous literature, there are a number of methods to quantify risks such as the Six Sigma Method, the Failure Modes and Effect Analysis and Statistical Control method. On the other hand, Analytic Hierarchy Process (AHP) (Saaty, 1980) which is popular and widely used method for multi- criteria decision making systems to determine the relative scores of each risk factor. The model presented in this study utilizes the AHP to calculate the risks’ scores to determine risks efficiently for the NPO.

The following Table 1 shows importance scale for pair wise comparisons of (risk xy) of two risk items (item x and item y). In other words, risk xy represents the comparison between item x and item y. If item y is 7 (very strong importance) times more important than item x, then the comparison of risk yx = 1/7.

Table 1: Scale of importance

Intensity of Importance	Definition	
1	Equal Importance	Two factors contribute equally
3	Moderate Importance	1. Factor slightly favours over 2. Factor
5	Strong Importance	1. Factor strongly favours over 2. Factor
7	Very Strong Importance	1. Factor is favoured very strongly over 2. Factor
9	Extreme Importance	1. Factor is favoured in the highest possible way
2,4,6,8		Intermediate Value

4.4.3 Risk Evaluation

The evaluation objective is determined as a selection of the most effective risk. The evaluation criteria are financial losses, image, growth and quality of organization while the alternative risks are listed as follows:

- Financial Risk
- Other Associations Risk
- Own Associations Risk
- Student Risk
- Executive Staff Risk
- Activity Risk
- Political Risk
- Intentional and Behaviour Risks

As it was stated before that AHP method which is used as an evaluation technique in order to figure out the most significant risk consists of three phases. 1) Comparison of objectives is the first phase in which a matrix is established where columns represent the predetermined alternative risks and rows include the evaluation criterion. The value of pairwise comparisons which are collected from experts of the organization in terms of four main objectives; financial losses, growth, image and profit are input inside the matrix. **Hata! Başvuru kaynağı bulunamadı.** given below shows the compact of the illustration of the matrix.

Table 2: The comparison of objectives, using the AHP method

Financial Losses	Financial Risk	Other Associations Risk	Own Association Risk	Student Risk	Executive Staff Risk	Activity Risk	Political Risk	Intention and Behaviour Risk
Financial Risk	1	5	3	7	3	8	6	9

Other Associations Risk		1	5	3	1/5	1/2	1/6	2
Own Association Risk			1	6	1	4	3	3
Student Risk				1	1/6	1/4	1/4	1
Executive Staff Risk					1	4	3	5
Activity Risk						1	1/6	4
Political Risk							1	7
Intention and Behaviour Risk								1

2) Building normalization matrix phase includes some mathematical calculations to specify the relative weights of the decision criteria. In order to normalize the criteria, each value of paired comparisons divided by the summation of the columns and then the average of rows refer to the relative weight of each risk type. All calculations are presented in the Table 2 below.

Table 2: An example of “Normalized Matrix” during AHP application procedure

Normalized Matrix for Financial Losses	Financial Risk	Other Associations Risk	Own Association Risk	Student Risk	Executive Staff Risk	Activity Risk	Political Risk	Intention & Behaviour Risk	Total	Average	Measure
Financial Risk	0,41	0,25	0,27	0,22	0,49	0,33	0,44	0,28	2,69	0,34	34%
Other Associations Risk	0,08	0,05	0,45	0,09	0,03	0,02	0,01	0,06	0,81	0,10	10%
Own Association Risk	0,14	0,01	0,09	0,19	0,16	0,17	0,22	0,09	1,07	0,13	13%
Student Risk	0,06	0,02	0,02	0,03	0,03	0,01	0,02	0,03	0,21	0,03	3%
Executive Staff Risk	0,14	0,25	0,09	0,19	0,16	0,17	0,22	0,16	1,37	0,17	17%
Activity Risk	0,05	0,10	0,02	0,13	0,04	0,04	0,01	0,13	0,52	0,06	6%
Political Risk	0,07	0,30	0,03	0,13	0,05	0,25	0,07	0,22	1,12	0,14	14%
Intention and Behaviour Risk	0,05	0,02	0,03	0,03	0,03	0,01	0,01	0,03	0,22	0,03	3%
Total	1	1	1	1	1	1	1	1	8	1	

3) Ranking of the weighted alternatives is the last phase in which all calculated scores of each risk factor depending on evaluation criterion are shown in a same chart. To define the most important risk types, firstly, the summation of the risk factors taken in terms of financial losses, image and growth. In the second step, the relative rankings (priorities) of alternatives were determined. It is apparent from the obtained results that the *Financial Risk* is specified as a most effective risk than others in our case study. The final results are summarized in the Table 3 below.

Table 3: The weights of risk factors

	Financial Losses	Image	Growth	Quality	Total	Priority
Financial Risk	34%	11%	30%	30%	105%	1
Own Association Risk	13%	20%	18%	18%	69%	2
Executive Staff Risk	17%	7%	14%	17%	55%	3
Activity Risk	6%	21%	11%	9%	48%	4
Intention and Behaviour Risk	3%	19%	13%	13%	48%	5
Other Associations Risk	10%	9%	3%	4%	26%	6
Political Risk	14%	4%	3%	3%	25%	7
Student Risk	3%	8%	8%	5%	24%	8

The results can be summarized as follows.

1. The results identify the financial risk as the most important risk factor since the score of financial risk is the highest score for all the tables. The NPO should deal with ways to mitigate this risk. Moreover, lots of interpretations can be made about the results of tables:
2. The financial risk is for sure the most effective risk in financial losses. In other words, if the NPO makes a monetary mistake, the most apparent damage is the cost rather than image and profit.
3. Activity risk and own association risks are more significant from the aspect of the NPO's image. The reason is that the NPO is known with their spectrum of activities; therefore, the impact of activity risk is directly linked with reputation of the company.
4. In order to make company grow, the NPO should arrange the economic situations like fees or donations in a balanced way to decrease the financial risk.
5. In the same way, the financial risk affects the company's quality negatively. Losing benefactors or declining number of students is the unwanted situation for all NPOs. Thus, the company scores significant loss in its quality when an unbalanced situation occurs for financial resources.
6. It can be concluded that internal risks cause more hazard than external risks owing to the fact that the possibility of external risks is much lower.
7. To conclude, considering the whole risk results, the financial risk should be immediately mitigated. It is suggested that the NPO should take precautions and measures for eliminating or at least reducing these risks.

4.4.4 Risk Mitigation

Risk Mitigation is the phase in which mitigation decisions are taken to stop or at least reduce the effects of risks. This phase is composed of many mitigation strategies and new implementation plans for undesired event occurrences.

After evaluation of risk alternatives, the risk management plan is documented, justified and described. Also the chosen treatments are described. During this process allocated responsibilities are recorded, monitored and evaluated, and assumptions on residual risks are made. To handle possible risks, the following suggestions might be offered for the NPO organizations:

- Financial Risk
 - Finding new financial resources
 - Effortless and inexpensive transportation vehicles to reach activity location
 - Ensuring the more transparent financial structure for expense awareness
- Activity Risk
 - The increased quantity and diversity of activities to support recognisability
 - Announcement of activities by using all social media opportunities
 - Sufficient speakers for the educational activities
 - Academic and systematic education or training
- Student Risk
 - Acceptable and appropriate activities for all kind of students
 - Carrying out activities in a harmonized atmosphere
 - Out of town trips for country introduction

The impact of mitigation plans should be monitored. For many reasons, an organization should have a dynamic control system on managing risks in an organization and frequent system updates by applying some other changes within the system or in the environment.

4.5 Conclusions

This chapter explained the central importance of risk management for NPOs. One of the more significant findings to emerge from this study is that an analytical approach and risk management framework is provided for NPOs. By means of these findings of the study, NPOs will be able to increase the efficiency of its organization and reduce the risk of major possible malfunctions simultaneously.

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