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## Offering a framework for evaluating the performance of project risk management system

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### 1. Introduction

The roles and contributions of risk management within organizations have evolved and grown over the years. Because of challenges that impact supply chains, assets, earnings and operations, more enterprises have recognized the importance and value of firm wide risk management, and risk managers have both fueled and responded to the rising expectations. Increased expectations generally bring new challenges. Because organizations are increasing their overall expectations of the risk management function, it's important that a framework for measuring the performance of risk management is explicitly defined, agreed upon, and measured.

Regarding the speed of changes associated with the external environment and the processes of the organization, many risks and unforeseen issues arise that may threaten the business of the organization. Risk is inherent to functions of a business and can affect them to a large extent (Acharyya, 2008). The Casualty Actuarial Society defines enterprise risk as the combination of hazard, financial, operational and strategic risks, But the Committee of Sponsoring Organizations of the Tread way Commission's (COSO) definition includes four risk categories (strategic, operations, reporting and compliance). These definitions suggest that ERM essentially needs an integrated view across all risk types and all segments (Acharyya, 2008). The risk management system is considered as an efficient tool to manage all risk categories in an integrated fashion (Cooper et al, 2005). A risk management system can be an effective management response to a dynamic business environment and acceleration of technological development. This system measures and manages all risks of the business systematically irrespective of types and nature. The main objective of the risk management system is to make the personnel plan and carry out their tasks in terms of risks and the consequences to manage the risks and uncertainties appropriately. One important aspect of the performance of the risk management system is the effective and efficient mitigation of risks. Because the inappropriate risk response process waste time and organizational resources and the targets on risk mitigation will also become meaningless (Basova & Mitselsky, 2011). According to AIRMIC1 very few organizations manage all categories of risk in an integrated fashion, RM Software used by many organizations but many also use spreadsheets, risk policies influence consistency but as a rule have little direct influence on amount of risk accepted and there is scope for improving the quality of risk identification, even in some of those organizations that are best at risk management (John Knott, 2009).

On the whole, the risk management system should provide a basis for the effective and efficient management of risks. In this regard, it is obvious the successful performance of the risk management system is crucial for its value to the organization (Basova & Mitselsky, 2011). The risk management system creates value at both enterprise-wide and business-unit levels. At the enterprise-wide level, this system creates value by enabling senior management to quantify and manage the risks affecting the entire organization and other resources necessary to implement its strategy and business plan (Nocco, 2006). The execution of the risk management system requires the introduction of value based management, and provide a basis for the organization to prioritize decisions based on their impact on corporate value (Young, 2000).

It is clear that the type of performance measures required for this system should directly be related to organizations' strategic goals. Moreover, the outcomes of the risk management system should provide information in determining

corporate objectives and corporate strategies. Since the risk management system is a management system, its performance should provide feedback for the cognitive and behavioral learning processes of the firm in addition to delivering tangible value (Feurer, 1995). Basically, a performance measurement framework for risk management system seems inadequate since it ignores critical aspects of organizational strategic goals (Acharyya, 2008).

In project-based organizations which face with very dynamic business environments, establishment of a proper risk management system is of crucial significance. In this regard, an appropriate performance assessment framework is needed. However, due to the lack of research in this field, this important subject has been unclear for both the academics and executives. Therefore, the objective of this study is to propose a conceptual framework of measuring the performance of project risk management system through a field study.

## **2. Research Methodology**

The objective of this field study is to propose a conceptual framework of measuring the performance of project risk management system. The purposive sampling was used for sampling. The data gathering tools include questionnaire and open interviews. Furthermore, the Cronbach's alpha was calculated 0.78 using the SPSS software. The steps of the research are mentioned below: 1. Conducting an in-depth literature review 2. Identifying the risk management indicators 3. Developing a questionnaire to evaluate the applicability of indicators for project-based organizations 4. Analyzing the questionnaire and finalizing the indicators 5. Conducting open interviews to risk management experts to categorize indicators and develop a framework.

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## **4. Results**

As described in the literature review above, the basic framework for a performance measurement system for risk management is to categorize the priorities of the risk management and define performance indicators for them. Afterwards using a method similar to the balanced score card, AHP or SAW the risk management performance index can be calculated. The first step of the research is to research the priorities of a risk management system.

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## **5. Conclusion**

Although there is various risk management metrics for analyzing the performance of the enterprise risk management system and monitoring risk in a project. There is no framework for evaluating the performance of the project risk management system. In this paper after categorizing the success of the project risk management system in two categories, various KPIs for calculating the performance of each category was listed. After normalizing and receiving a weight for each KPI, the performance of each category was calculated using the simple additive weighted method. The total project risk management score was calculated with a simple average between these two categories. The project risk management can be either evaluated using each category score or the total project risk management score. Using the category scores can help project risk managers evaluate were the project risk management system is failing and help in creating improvement plans.

Although the use of the SAW method was intended for easier use by project risk managers, further research can be done on calculating the performance score using AHP, ANP or other scoring methods. Furthermore, as the BSC has been modified to include different categories, different risk categories and KPIs can be explored for the framework.

## **References**

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**Redacte en ESPAÑOL el abstract del artículo y cinco conceptos clave de acuerdo a la información suministrada.**