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Process Approach to Enterprise Risk Management

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Process Approach to Enterprise Risk Management

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Abstract—Recently, special attention is directed to the Enterprise Risk Management (ERM), as a new risk management approach, aiming to provide organizations with an integrated management strategy to deal with their risks. The construction industry is a field in which the involved companies perform certain and consecutive sets of activities via various units. In all organizations, desired results with greater efficiency and effectiveness are achieved only when their activities are managed altogether as an integrated process. As a result, the application of a process approach can be very helpful for the implementation of ERM. This study sets out to identify the advantages of using a process approach in ERM. Hence, the need for using a process approach for the implementation of ERM is discussed through reviewing the relevant literature and it is argued that the application of a process approach can improve critical success factors of ERM including identification and analysis of risks, response to risks, transparency in ERM ownership, responsibility of ERM implementation, development of a risk management information system, capability of measuring risk management outcomes, integration of risks exist in different units, reduction of financial losses, and improvement of business performance.

Keywords—Enterprise Risk Management, Process Management Approach

I. INTRODUCTION

During recent decades, risk management has been taken as a strategic management discipline and a necessary policy [1]. Nowadays, firms are dealing with various internal and external risks. Dynamic nature of these risks challenges the risk officers and encounters them with many problems. Organizations have now recognized the necessity of ERM implementation for dealing with these problems. Literature review implies the need for the conduction of more studies on the use of ERM at organizational level [2, 3]. In recent years, the majority of relevant studies have been focused on the effective factors, barriers, and mechanisms of ERM implementation in advanced countries such as the US, England, Germany, Canada, and Australia [4-11], however similar studies are very few in developing countries such as Iran and the main stream research relevant to the topic address traditional risk management in these countries [12-14]. For example, Toosi and Sabt [14] addressed the implementation of project risk management, identification of causes of different risks, detailed analysis of risk, planning and

implementation of risk responses, and assignment of risks to respective authorities aiming to provide an effective control over the major risks.

In another study, Hajbagheri and Sadeghi [13] investigated the state of risk management in construction industry in Iran on the basis of risk management process guidelines presented in Project Management Body of Knowledge (PMBOK).

According to research findings, traditional risk management is not efficient enough to address the complexities of today's business settings. On the other hand, implementation of ERM requires an integrative view to consider different aspects of an organization. Thus, this study contributes to the field by introducing the advantages received by the application of process approach to the implementation of ERM.

The following sections of this article introduce ERM approach and its critical success factors (CSFs) and then, argue how the use of process approach can greatly contribute to the implementation of ERM and improve its CSFs.

II. LITERATURE REVIEW

This section starts with a review of the advent of ERM concept and an analysis of its definitions, advantages and CSFs, followed by a short introduction of process approach.

A. Enterprise Risk Management (ERM)

There is no unique definition for ERM, rather, it is defined differently by various institutes and authors. Since the Committee of Sponsoring Organization's (COSO) definition of ERM has been widely accepted within various industries, including the construction field, it was selected to be used in this study.

In 1990, the ERM arose as a field of study and began to be matured after COSO published an integrated ERM framework in September, 2004. In the mid-2004, COSO defined ERM as a "...process, affected by an entity's board of directors, managers, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity's objectives." [15]

Why should enterprises pledge for ERM? There are some theoretical motives in this regard. According to the COSO's theory, ERM promotes the awareness of risk resources, improves corporate performance, and reduces corporate

fluctuations and the cost of capital, resulting in higher corporate value [16].

Another advantage of ERM is that it integrates different risk management activities through the integration of different risk categories and groups [17]. In addition, the application of ERM may promote the awareness of risks in a company, and thus can improve its decision-making capability and value [3]. According to the aforementioned advantages, it can be concluded that the implementation of ERM is very useful for companies, however, a successful ERM implementation depends on the identification of its critical success factors.

1) *Critical success factors of ERM*: CSFs are those key factors which have strong impact on organization's outcomes and the fulfilment of its objectives [18]. To identify critical success factors of ERM, a comprehensive literature review was conducted, yielding 50 CSFs for ERM. According to the Pareto principle which claims: "for many events, roughly 80% of the effects come from 20% of the causes", 20% of CSFs with highest frequency were identified (Table 1).

TABLE I. MOST FREQUENT CSFS OF ERM

Row	CSFs of ERM	Frequency
1	ERM ownership	12
2	Commitment of board of directors and senior management	9
3	Informed risk culture	9
4	Risk management information system	7
5	Stages of iterative and dynamic process of ERM	7
6	Identification, analysis, and response to risk	7
7	Adequate resources	6
8	Size	6
9	Appointment of a chief risk officer (CRO)	6
10	Integration of ERM into business processes	5

These factors should be at the center of attention to ensure successful ERM implementation. The CSFs are categorized into 4 groups: (i) implementation and integration, (ii) communications and understanding, (iii) commitment and interaction of senior managers, and (iv) organizational characteristics.

B. Process Approach

Process is a set of connected or interactive activities that transform inputs into outputs [19]. The process approach refers to the application of a system of interoperate processes, along with the determination of communications and interactions between these processes to achieve a more desirable output [20].

Advantages of a process approach include the identification of intra-unit activities, identification and elimination of parallel processing in various corporate units, identification of the owners of all corporate activities, tracking and modification of information flow, inter- and intra-corporate interactions and communications and activities, precise measurement of processes within the frameworks of efficiency, effectiveness, productivity, and profitability, frequent control over intra-process communications, and their combinations and interactions within the process structure, paying attention to processes on the basis of value added, integration and coordination of processes to achieve appropriate outcomes,

transparency in corporate operation, reduction of costs, shortening time cycle for effective use of resources, and optimized, stable, and predictable outcomes, creation of opportunity for concentration and encouragement of employees to participate and prioritize improvement activities, and clarifying their responsibilities [20].

III. RESEARCH STATEMENT

Literature review suggest the need for the conduction of more studies on the use of ERM in enterprises [2, 3]. In recent years, the majority of relevant studies in the advanced countries such as the US, England, Germany, Canada, and Australia have been on the effective factors, barriers, and mechanism of ERM implementation [4-11]. Unfortunately, there are few relevant studies in developing countries, especially Iran. In addition, the majority of Iranian enterprises are not familiar with this subject, and the main portion of relevant studies in Iran have addressed traditional risk management in each unit separately, using a functional approach [12-14].

Accordingly, an organization can improve productivity when its staff and resources, including information system, are capable of having optimal connection and cooperation. This notion requires the identification, analysis, implementation, monitoring, and improvement of existing processes. This implies the growing importance of using process approach instead of functional approach in organizations. With respect to the construction companies, manufacturing of the end product needs cooperation between certain consecutive sets of individuals, resources, and working activities in various units. Regarding the advantages of process approach, it can be very helpful in successful implementation of ERM.

IV. NECESSITY OF USING PROCESS APPROACH IN ERM

According to the suggestions by different standards, books, and articles, the necessity of using process approach in ERM implementation is explained in this section.

In the first step, ERM implementation methods can be categorized into following groups on the basis of several articles and reports:

- I. Risk culture
- II. Enterprise
- III. Process

Previous studies on the process of ERM implementation have provided a series of critical factors for the design of ERM systems, indicating the necessity of using a process approach in the implementation of ERM. Some of these critical factors are:

- Integration of ERM into strategic and business plans;
- Implementation of an efficient process for identification of all risks;
- Creation and maintenance of records of risks;



Fig. 1. Advantages of process approach that strengthen CSFs of ERM

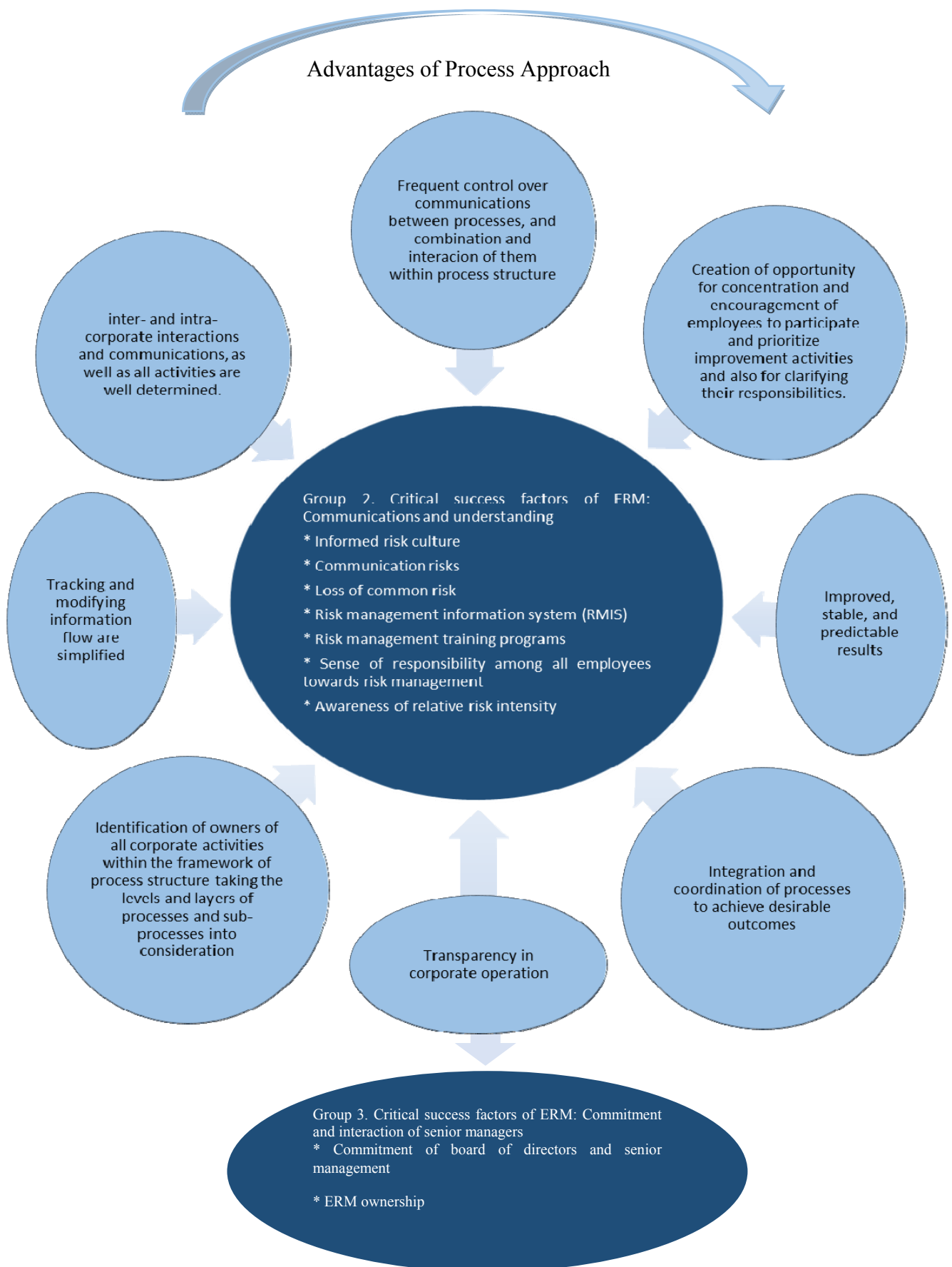


Fig. 2. Advantages of process approach that strengthen CSFs of ERM

- Development of an official process for risk assessment using qualitative and qualitative techniques;
- Periodical repetition of risk assessment process;
- Integration of all risks into a single one and assessment of the relationship between them [15, 21].

In the second step, two important points regarding the necessity of using a process approach in ERM are presumable, according to previously addressed critical success factors of ERM. First, the "stages of iterative and dynamic process of ERM" are another critical success factor for a successful ERM implementation [4, 22-27]. Second, the "integration of ERM into business processes" has been introduced as another critical success factor for a successful ERM implementation [22, 25, 27-29]. This indicates that ERM should be completely integrated with business and management processes of an enterprise [30]. Therefore, the integration and implementation of ERM are closely correlated.

In the third step, the newest version of ISO9001 (2015) is employed to show the importance of using a process approach in ERM. According to the guidelines of this standard, the adoption of a process approach promotes the implementation of a quality management system and improves its effectiveness, which increases customer satisfaction according to the terms and conditions. In addition, understanding and management of relevant processes, as a single system, contribute to higher effectiveness and efficacy in achieving the desired results. This approach enables the enterprise in controlling mutual relations and dependence of system processes, in a way that the overall performance of it is improved [31].

According to the aforementioned advantages of process approach, the necessity of using the process approach in ERM is explained in the fourth step (Figure 1&2). This step also addresses the way each advantage of the process approach strengthens critical success factors for a successful implementation of ERM.

V. CONCLUSION

This study was conducted to identify the advantages of using process approach in the implementation of ERM. Consequently, advantages of using ERM approach were categorized into four main groups including: (1) improvement of corporate performance; (2) improvement of corporate effectiveness; (3) improvement of risk reporting process; and (4) improvement of corporate governance. Then, the most frequent CSFs for implementation of ERM were identified through a comprehensive review of literature. Further, the definitions of process, process approach, and its advantages were presented. After the presentation of the research statement, the necessity of using the process approach in ERM was shown according to valid references, articles, and documents. Then, the benefits of applying process approach in order to implement ERM were argued. In addition, the ways each advantage strengthened the CSFs of ERM were

addressed. These advantages include: (i) identification, analysis, and response to all risks, (ii) improvement of business performance, (iii) transparency in the ownership and responsibility of ERM implementation, (iv) development of a risk management information system, (v) capability in the measurement of risk management and profitability, (vi) integration of risks existing in different units, (vii) supervision, investigation and improvement of ERM framework, (viii) reduction of financial losses, (ix) improvement of business performance, (x) frequent participation in and maintenance of ERM practices, and (xi) creation of sense of responsibility in all staff towards risk management. It is believed that the study paves the road for more research on the application of process approach in the management of risks at the enterprise level.

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