

# Business continuity: conceptualization and methodologies of evaluation

[Editorial]

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Business continuity is the current challenge for organizations since they have to face increasing demands in dynamic environments. Companies are exposed to different situations such as failures, natural disasters, attacks, economic crises, among others, which leads to a proactive approach to protect the business from such effects. Therefore, strategies such as *Business Continuity Management* (BCM) have been created, which is considered a way to incorporate the recovery process within the preventive framework of the organization risk assessment (Timms, 2018; Zeng & Zio, 2017).

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From the point of view of the International Organization for Standardization - ISO, business continuity is the capacity of organizations to sustain themselves before internal and external risks that may affect their permanence in the market, as well as to continue with their offer within a set time sustainedly (International Organization for Standardization, 2019).

In addition, BCM is part of the supply chain risk management and is a competitive factor for companies since it helps ensure the proper functioning of essential business processes in case of failure or any circumstance. When business operations are seriously disrupted, the decision maker of the companies faces a situation characterized by a high degree of uncertainty, complexity, and time pressure. Therefore, strategies are required to support timely decision making and to add value to the organization. (Schätter et al., 2019).

It is worth noting that the implementation of a business continuity management system contributes to the protection of life, property and the environment, protection and improvement of the reputation and credibility of the organization, greater competitive advantages since it manages to operate during interruptions, cost reduction and efficiency improvement, increase of resilience capacity, reduction of legal and financial exposure as well as the capacity of risk management to respond to operational vulnerabilities (Icontec, 2020). Therefore, the technical standard ISO 22301: 2019 becomes a good management practice for organizations regardless of their size or business activity. In addition, Colombia has the GTC-ISO 22313: 2020 wherein guidelines on the use of the NTC ISO 22301 are set forth.

In addition, developing well-established plans that include the identification of business disruption risks, definition of strategic and tactical plans, proactive management and preparation to achieve a goal are

essential to ensure business continuity (Faertes, 2015). For this, a *Business Continuity Plan* (BCP) must be created, which is a guide of procedures to create plans that prevent, prepare, respond, manage and recover a company from disruptions in order to continue the business in the long term (Fani & Subriadi, 2019).

Guidelines have been created for BCM strategies implementation in SMEs, given their high vulnerability (Kato & Charoenrat, 2018). The International Labor Organization (ILO) published *BCM guidebook*, which indicates that three essential elements should be considered: 1) preventive measures; 2) preparation arrangements; and 3) response options (OIT, 2011)

BCM has been compared to conventional risk management methods and has been shown to contribute not only to the protection of the system against disruptive events, but also to the recovery process during and after the event (Xing et ál., 2019).

The methodologies for evaluating business continuity are mostly quantitative. It is important to emphasize that these methods are static in time, that is to say, they account for the level of risk at a specific time point. Therefore, these methods do not consider the components deterioration (Xing et ál., 2019) or information, data, systems obsolescence. In this sense, permanently update is necessary

On the other hand, Torabi et ál. (2014) states that business impact analysis (BIA) is one of the key processes when implementing a BCM management system since it provides an adequate perception of the organization's key products and processes. Data collection and analysis are two main steps of BIA.

Methods have been developed to evaluate business continuity areas in the oil sector (Zeng & Zio, 2017), in the food sector (Schätter et ál., 2019),

among others. On the other hand, Xing et al. (2019) developed a simulation model to evaluate the dynamic business continuity metrics originally introduced. This model was used to determine a risk scenario of a nuclear power plant to demonstrate the proposed approach applicability.

On the other hand, the REDRISS methodology allows robust and flexible solutions to a wide range of logistical decision problems during an interruption reaction phase. REDRISS consists of three parts: (1) implementation, (2) scenario building in two stages and (3) robustness measurement comprising seven tasks (optimization model, parameter classification and calibration, forecast scenarios, generation of alternatives, what-if scenarios, regret test and integration of risk preferences), therefore, it is an innovative measure of disaster risk reduction within organizations (Schätter et al., 2019).

In addition, conceptual models have been created as that proposed by Zeng and Zio (2017). This model divides the business process into four sequential phases: protection, mitigation, emergency, and recovery. The protection, mitigation and emergency phases are modeled by event tree models, fault trees and sequence of events diagrams for characterization of intermediate events-associated probabilities. The recovery phase is modeled by a semi-Markovian model. This model was developed with simulation to calculate business continuity metrics.

In this context, there is a diversity of documents that contribute to the understanding of business continuity and its evaluation strategies. These and other advances in knowledge are expected to contribute to organizations sustainability. In other words, research on organizational interventions should contribute to the real-world impact understanding in such a way as to generate results based on both scientific rigor and practical relevance.

Finally, it is worth mentioning the research carried out by Von Thiele et ál. (2020) in which they identified 10 principles that organizational research should meet:

1. Ensure commitment and active participation among key stakeholders
2. Understand the situation (starting points and objectives)
3. Align intervention with existing organizational objectives
4. Explain the logic of the program
5. Prioritize intervention activities based on effort and gain balance
6. Working with existing practices, processes, and mindsets
7. Observe, reflect, and adapt iteratively
8. Develop organizational learning capabilities
9. Evaluate the interaction between intervention, process, and context
10. Transfer knowledge beyond the specific organization

The principles suggest how the design, implementation, and evaluation of organizational interventions can be investigated in a way that maximizes both practical and scientific impact (von Thiele et ál., 2020). In this sense, academic journals are expected to contribute to the spreading of knowledge developed on various topics related to management and organizational development, including business continuity and its evaluation methodologies, so that it can be used in the business environment.

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