

Explaining Features and Dimensions of Organizational Resilience in Manufacturing Organizations Facing with Hazards and Challenges

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Abstract

The present research attempts to introduce features that organizations can take advantage of them to prepare themselves for challenging situations and hazards. The philosophy of this research is interpretive, which adopts a qualitative approach, and a grounded strategy based on the Glaserian emerging approach. The study population includes companies that manufacture applied products in the construction industry and operate in Mazandaran province, Iran. In this regard, in-depth interviews were conducted with experienced managers and employees who had perceived the processes of resilience, and had enough knowledge about it. The results of the interviews analyses and two stages of coding (actual and theoretical coding) showed that resilience dimensions include shock absorbing, adaptation to change, survival of the organization in the face of hazards, maintaining an acceptable position during the crisis, market leadership in times of crisis, growth experience, adequate financial strength in times of crisis, better recovery ability, increased production diversity in the face of environmental threats, satisfaction of the stakeholders in times of crisis, organizational dynamics, positive thinking, and brand credibility and reputation. Overall, due to the dimensions of organizational resilience in this native research, organizational resilience has characteristics that encourage industry managers to obtain these indicators in response to environmental hazards and external and internal challenges. Therefore, it is necessary that managers pay attention to these features and try to obtain them in order to improve the organization's status in crisis situations.

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Introduction

In the turbulent and risky environments where businesses face with many challenges and opportunities, organizations struggle to achieve their goals by focusing on problems, and using opportunities, they attempt to reach issues beyond their goals. Considering these issues, organizational studies are focused on both using opportunities and solving problems and coping with risks. Problems and difficulties faced by organizations include problems such as stagnation, crises of sales and credibility of the organization, expulsion of employees, strike of workers, lack of raw materials, lack of working capital, non-issuance of necessary licenses and the like. In addition, unexpected events and sudden changes often shock the organization [8]. In this regard, some organizations are not prepared to deal with these problems, causing a reduction in their performance levels. That is, not only they do not grow positively in the face of problems, but also their overall performance may be reduced, and they may even go bankrupt in these situations. Accordingly, it should be noted that any of the problems related to the organization may have a different impact on the organization and the human resources. One resilience expert believes that resilient human resources and organizations are considered as an opportunity. The resilience of organizations is an opportunity because these organizations make less effort to adapt to changes, so they have more (time and financial) potential to improve productivity and quality [9]. That is why organizations should consider resilience in tangible work structures in the short- and long-term [7]. A recent empirical research based on a theoretical framework expresses the extraordinary contribution of human capital to resilience of the company [10]. On the other hand, a number of researchers wrote about the concept of resilience and organizational resilience [5, 6, 14, 12, 13], but they did not agree on several factors: a) definition of organizational resilience; b) key features that individual teams or organizations must provide in order to adapt to change in a resilient way; and (c) the way in which an organization's design and structure supports resilience. These factors indicate that there are still gaps in research on resilience. Therefore, some of the resilience features remain unknown. The construction industry is a significant part of macroeconomics [15] and its resilience is important. According to the most recent statistics of the Statistical Center of Iran in the field of bankruptcy, at least 166,000 industrial workers lost their job in 2014 and 2015 as a result of disruptions of the industry. These statistics suggest that in many industries in the country, there is a resilience problem and organizations have not been able to optimize themselves in this regard, because resilient organizations usually do not go bankrupt or shut down. In recent years, most organizations in the country, especially manufacturing companies of applied products in the construction industry, have faced problems such as expulsion of employees, stagnation, lack of liquidity, job stress, bankruptcy, and so on. Therefore, measuring the resilience components in the

manufacturing industry of construction products is one of the first steps in their resilience management process. Due to the multi-year stagnation, there is almost an agreement that one of the major problems of the organizations in the country - especially the organizations that produce applied products in the construction industry - is the lack of a coherent process of resilience management, especially in defining and identifying resilience components such a way that these components and attributes will be strengthened based on them.

The concept of resilience in literature has been also referred to as balance and adaptation to change. He believes that organizational resilience is the ability of an organization to manage changes [11]. It was also defined as the ability of a system to absorb, or tolerate, a change without losing a specific feature or expected behavior [1].

Some researchers consider the three resonance dimensions as including interpretation, resilience capacity, and actions [6]. Others consider these dimensions as being a two-dimensional structure, including exposure to adversity and positive outcomes. Garnezy's triadic model described the resilience as dynamic interactions among risk and protective factors on three levels (individual, family, and environmental) [6].

Materials and methods

The philosophy of this research is interpretive and adopts a qualitative approach and a grounded strategy with an emerging approach. The study population of this research is the organizations that manufacture construction products in Mazandaran province which have been active in this industry since 2007. In general, organizations that firstly encounter different problems, stagnation, crises, or shocks, and secondly resist or grow up against those problems, are appropriate candidates to carry out this research. The qualitative repository of this research includes managers and experts from selected organizations that have theoretical and practical knowledge of the subject matter and have experienced organizational resilience in the incidence of problems. The sample includes 22 people who have at least 8 years of related work experience and full knowledge of the processes of becoming resilient. Theoretical sampling was used for sampling. Since data saturation determines the sample size in the qualitative part, more subjects were interviewed until the data saturated.

Discussion and Results

After an open and selective coding in the emerging approach, axial coding is done. Axial coding refers to the integration of concepts by a communication pattern. The theoretical codes are abstract models which lead to a wide range of mental possibilities and integrate categories into a theory [4]. Like real codes, they are spontaneous [2]. In order to integrate real codes, Glaser first introduced 18 families of coding [2] and then added 9 and 23 families of coding to the

previous family [3, 4]. According to the investigations carried out by the researchers on the relationships between concepts, it seems that in this study, the “Dimensions” family in the apparent approach allows for combining concepts and categories in the best possible way. The model of this research is included in the “dimensions coding family”. Organizational resilience includes 13 dimensions. These 13 dimensions include: high impact absorbing, adaptation to change, survival of the organization in risky situations, maintaining an acceptable position in the crisis, experiencing growth in inappropriate conditions, market leadership in times of crisis, adequate financial power when faced with challenges, better recovery ability, high volume of production during threats, satisfaction of stakeholders during the crisis, organizational dynamics, positive thinking, credibility and brand reputation.

Conclusions

The discovery and analysis of many of the indicators and components of organizational resilience was mainly based on very general indicators; for example, resilience in the supply chain, resilience in the production, and so on. These indicators also had limitations. The limitations of the indicators are due to the researchers' different views on organizational resilience, and most indicators have less attention to all organizational issues such as supply, production, marketing, sales, distribution, and so on. However, current research has tried to examine the resilience from an organizational point of view and measure its dimensions. As presented in Figure 1, some dimensions are different from the dimensions of previous researches. But others, such as shock absorption, adaptation to change, survival and better recovery, have been somewhat as what had been mentioned in previous researches. Although many of these dimensions have been observed sporadically in several studies, this study, by taking into account these components together, provided a more comprehensive view. Another noteworthy point is that the new aspects of each of these dimensions appeared in the current research. For example, although the shock absorption has been discovered in previous researches, some of the shock absorption concepts considered in this study are somewhat different from previous studies. Some of these aspects include the ability to replace an expert workforce with outside personnel, access to different distribution centers, no loss when selling a product due to multi-product, low mental vulnerability in personnel, no significant decline in sales compared to new products of the competitors, coverage of vulnerable parts by other parts of the organization, shock absorbing in the supply of raw materials, low vulnerability to employees layoff, low vulnerability to changing customer demands, and low vulnerability to operational processes. Similarly, other dimensions that have been somewhat mentioned in earlier researches also have different aspects in this research. On the other hand, some behavioral, financial, and marketing indicators were also

considered in this study which had been rarely seen in research, such as high volume of production during environmental threats, adequate financial power when faced with challenges, maintaining an acceptable position in the crisis, high shock absorption, adaptation to change, satisfaction of stakeholders during the crisis, positive thinking, credibility and brand reputation, market leadership in times of crisis. Each of these dimensions also has different meanings and implications that are mentioned in the Findings section. In general, the resilience dimensions taken into account in this study are somewhat different from the dimensions and components found in previous studies. On the other hand, some of those dimensions are among the causes of resilience and cannot be considered as its dimensions. For example, management and governance structure, minimizing disturbing thoughts, information and knowledge, leadership, planning strategies and so on, contribute to resilience, which have been considered as components in some researches, and it is best to consider them as a part of the characteristics of resilient organizations rather than organizational resilience. Resilient organizations include features such as the causes and dimensions of a phenomenon, while organizational resilience must include dimensions. On the other hand, when the dimensions of a concept are examined, they should be brought together in order to achieve the desired concept. The dimensions mentioned in this study explain the characteristics of organizational resilience to a large extent. In sum, this research presented a native and novel horizon regarding the dimensions of organizational resilience.

It is recommended that future researches examine resilience in different parts of the Iranian organizations, because despite the limited examination of resilience in foreign studies, domestic studies have not focused on this issue. The discovery of resilience features in the marketing and distribution sectors, the resilience features of supply chain, and the resilience of the logistics and support sector during the crisis are among the recommended topics for future research. On the other hand, the study of the causes of the shock absorption in organizations, adaptation to changes, and other dimensions of resilience are among subjects that can be specifically examined.

Keywords: resilience, organizational resilience, dimensions of resilience, emerging approach.