

Original Article (Qualitative)

Developing and presenting a mathematical model for the purpose of organizational culture architecture based on creating alignment between the strategic reference points of organizational elements.

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Receive:

21 September 2023

Revise:

02 November 2023

Accept:

28 November 2023




Keywords:

culture,
organizational culture,
organizational elements,
strategic reference points,
organizational structure,
technology.

Abstract

The purpose of this research is to formulate and present a mathematical model for the purpose of organizational culture architecture based on creating alignment between the strategic reference points of organizational elements. The research method is applicable-developmental in terms of its purpose, and exploratory in terms of its nature. The statistical population of the research includes 20 academic and organizational experts, and the sampling was done in a purposeful, judgmental and snowball manner, and the interviews continued until theoretical saturation was reached. Semi-structured interview was used in this research. Delphi and fuzzy neural system were used to collect and analyze data. For data analysis, in order to refine the components and criteria of the conceptual model from the point of view of experts, the fuzzy Delphi technique was used, and in order to present the mathematical model, the adaptive fuzzy inference system and Matlab software were used. The results showed that a total of 4 dimensions, 12 components, and 57 evaluation criteria and several sub-criteria were identified, which include antecedents (business strategy, leadership, organizational structure, technology, human resources strategy), process (organizational culture, change strategy), results (individual, group, organizational performance), consequences (general accountability, increase of social capitals), and the obtained model has been tested in the organizations of the Islamic Revolution Mustazafan Foundation, and finally, the characteristics and suitability of this model has been evaluated in simulating and predicting the desired organizational culture based on the creation of alignment between the strategic reference points of the organizational elements.

Please cite this article as (APA): hasanzadeh Shweili, E., peidaie, M. M., & Rezghi Rostami, A. R. (2024). Developing and presenting a mathematical model for the purpose of organizational culture architecture based on creating alignment between the strategic reference points of organizational elements.. *Management and Educational Perspective*, 6(1), 124-158.

Publisher: Iranian Business Management Association	https://doi.org/10.22034/jmep.2023.421943.1255	
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Extended abstract

Introduction

Organizations need to have shared values to achieve coherence, coordination and implicit control. Having shared values; it will enable the managers and employees of the organizations to show positive reactions in unpredictable environments. These values are the focus of many organizational phenomena, such as organizational culture; which provides the context of self-control and counter-control and gives it direction (Abedelrahim, 2018). Organizational culture is a type of collective thought planning that has been prominent in recent years as a dominant thought in the field of organizations. This collective thought differentiates members from one species to another. It is necessary to have a common sense and belief among the members of the organization in order to give coherence to the different departments and components. Organizational culture plays a very strategic role in organizational cohesion or decline (Mozidi Sharafabadi & Zarei Mahmoodabadi, 2021). One of the issues that has always been the main challenge and concern of managers of organizations and has an impact on performance is establishing coordination between constantly changing external (environmental) needs and internal (organizational) resources in order to improve the organization's performance, which requires removing the internal shortcomings and the creation of new capabilities over time. Formulation of strategic reference points a method that can guarantee strategic coordination and has the ability to be implemented. The strategic behavior of organizations and as a result their performance is directly affected by the selection of options for strategic reference points (Sherbaf Oliaee et al., 2022). Based on this, the current research is looking for an answer to this question: What is the development and presentation of a mathematical model for the purpose of organizational culture architecture based on creating alignment between the strategic reference points of organizational elements?

Theoretical Framework

Organizational Culture

Organizational culture is considered as the factor of survival of organizations and providing their organizational growth. An organization that is not able to develop its organizational culture will not be able to survive, and organizational learning and learning culture have a fundamental role in the development of organizational culture in the organization. Organizational culture is the common pattern of thinking, feeling and reacting in a group of people. Usually, different units within an organization have different cultures. Managers, with their organizational behavior, with the methods they use to manage crises and solve problems, with ceremonies and symbols, and punishments and encouragements, play an important role in the formation and change and adjustment of cultures. In educational organizations, organizational culture plays an important role in producing teamwork culture and achieving the benefits of the process of participation and collaboration (Mohebbi et al, 2023).

Strategic reference points of organizational elements

Strategic reference points are points for coordination that, if all elements and systems of the organization coordinate with it, an all-round coordination will occur (Kiyajori & Brimani, 2017). The method of strategic reference points, which is also called alignment, has a key position in organizational studies and strategic management; because a suitable method for acquiring and creating value in the market and increasing the performance of the organization is the interaction and coordination between the elements and components of the organization and the environment (Walian et al, 2017).

Research background

Bermeh et al, (2023) investigates the dimensions and components of organizational culture based on normative and individual variables in the managers of education headquarters in Tehran province. The results showed that in the normative dimension, there are 10 categories: organizational justice, work maturity, ambiguity avoidance, external supervision, decision-making, job promotion, masculinity or femininity, concentration (power distance), customer orientation, and productivity with 57 indicators, and in the individual dimension also there are 10 categories: sense of belonging, responsibility, individual creativity, communication, participation (teamwork), identity, self-control, motivation, conflict tolerance, and interaction in 61 indicators, and were identified in 6 categories that include causal conditions, communication conditions, background factors, intervene factors, strategies, and consequences.

Mohebbi et al, (2023) investigated the role of organizational culture dimensions on the performance of educational organizations. The results of the research show that in educational organizations, organizational culture plays an important role in producing teamwork culture and achieving the benefits of the process of participation and collaboration. Educational systems have a special place according to their goals and mission, the most important of which is training efficient human resources for other institutions of society; and universities are also the most important and key educational organizations that, in addition to training human resources, respond to the social needs of the acquisition and dissemination of knowledge and technology. Today, performance management systems have become one of the most important management tools.

Research methodology

The research method is applicable-developmental research in terms of purpose, and exploratory in terms of nature. The statistical population of the research includes 20 academic and organizational experts, and the sampling was done in a purposeful, judgmental and snowball manner, and the interviews continued until theoretical saturation was reached. Semi-structured interview was used in this research. Delphi and fuzzy neural system were used to collect and analyze data.

Research findings

For data analysis, in order to refine the components and criteria of the conceptual model from the viewpoint of experts, the fuzzy Delphi technique was used, and in order to present the mathematical model, the adaptive fuzzy inference system and Matlab software were used. The results showed that a total of 4 dimensions, 12 components and 57 evaluation criteria and several sub-criteria were identified, which include antecedents (business strategy, leadership, organizational structure, technology, human resources strategy), process (organizational culture, change strategy), results (individual, group results, organizational performance), outcome (public accountability, increase in social capital); and the model obtained in the organizations of the Islamic Revolution Foundation of the Underprivileged (Mostazafan Foundation) has been tested and finally the characteristics and applicability of this model in simulation and prediction of the optimal organizational culture based on creating alignment between the strategic reference points of the organizational elements has been evaluated.

Conclusion

The present research was conducted with the aim of developing and presenting a mathematical model for the purpose of organizational culture architecture based on creating alignment between the strategic reference points of organizational elements. The results of



this research are in agreement with the results of Bermeh et al, (2023), Kaveh et al, (2021), Javaheri Zadeh & Fathi (2022), Mohebbi et al, (2023), Turki et al, (2021), Van Dung HA (2020), Zhen Shao (2019), Mozaffari (2022), Ashkbous et al, (2021), Babaei et al, (2022), and Hafizi et al, (2020). Zhen Shao (2019) investigated the mutual influence of strategic leadership behaviors and organizational culture in the strategic alignment of information and business systems and the integration of organizational systems. The results of empirical analysis show that the effects of idealistic behaviors and inspirational motivational behaviors of leadership are a great driver for the strategic coordination of information systems and business, which has the most positive effect on the integration of organizational systems. In addition, the culture of flexibility orientation positively moderates the relationship between strategic leadership behaviors and strategic coordination of business and information systems, while control-oriented culture negatively moderates these relationships.

According to the results of the research, the following suggestions are presented:

It is recommended that the organizations studied in this research, in line with the strategic orientation of the organization, strengthen the document of their strategic human resources plan and operational plans in the field of establishment, implementation, and development of systems and systems of human resources by using "best experience" models such as PCMM.

It is recommended according to the strategic orientation of the studied organizations; by observing the standard principles and designing of the organizational structure of the upstream institution, as well as the results of the analysis of organizational processes using the APQC model, information systems and employee capabilities, to revise and optimize the organizational structure of the studied organization.