ISSN: 2645-5498, SSYJ
2021, 12 (40), 109-122

Modeling the Effect of Agility on Organizational and Social Sustainability Mediated by Organizational Culture
(Case Study: Young Principals and Deputies of Public Schools in Babol)

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Received 20 March 2020, Accepted 18 September 2020

Abstract

The Purpose of this study was to model the effect of agility on organizational and social sustainability by mediating organizational Culture in young principals and deputies of high school and the descriptive research method was correlational based on the structural equations. The statistical population of the present study includes all young principals and deputies of public high schools in Babol city with 375 people in 125 schools. The validity of the instrument structure was confirmed and their reliability was calculated using Cronbach's alpha coefficient test and computational reliability which was statistically confirmed. Structural equations with SPSS 18 and AMOS23 software were used to analyze the data. Findings show that the variables of agility and organizational Culture have a significant direct effect on organizational and social sustainability and the indirect effect of agility on organizational and social sustainability mediates organizational Culture. The results of this study emphasized the need for the role of organizational agility and Culture on organizational and social sustainability.

Keywords: Agility, Organizational sustainability, Organizational culture.

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1. Introduction

Sustainability is not just an environmental concept, but can include broader concepts such as an organization's social responsibility (Bamgbade et sl., 2017). Success in increasing organizational sustainability depends significantly on hiring employees who are committed to sustainability (Mitchell and Willinga, 2017).Organizations that are successful in terms of sustainability can be distinguished from other organizations based on a series of organizational structural features. One of the tasks of the human resources department is to design and supervise the process of managing top talents (Marhraoui, and El Manouar, 2017). Managers of the human resources department should try to include the principles of sustainability in all activities and processes of this department (Ismaeli Askari and Kamali, 2015). Only in this case that the human resources department can play an important role in shaping the processes, actions and sustainability strategies of the organization (Shomali and Sadeghian, 2017).

In the field of sustainability, human resources have been neglected and should be given a more prominent role (Poldner, Dentoni and Ivanova, 2017). Top talent management activities such as selecting individuals, evaluating employee performance, their development and training can all and should be designed on the basis of a sustainable approach (Singh andVinodh, 2017). The fact that the selected person is committed to sustainability and will strive to create a sustainable organization should be a criterion and part of the employee selection process (Dooley, 2017). Also, evaluating the organization current employees based on the role they have played in creating sustainability and creating tools to encourage and motivate them to participate in activities and achieve sustainable goals should also be part of an organization's reward system (Adams, Martin and Boom, 2018). This is an issue that has been overlooked in many organizations. The activities of each organization have three separate dimensions: social dimension, environmental dimension and economic dimension, and any organization that evaluates and reports its performance based on this model is considered an organization that adheres to the principles of sustainability (Khadivi and Ostadi, 2018). To identify and evaluate the efficiency of the organization in terms of sustainability, instead of

adopting this three-dimensional model, adopt a four-dimensional model. It is necessary to look at the "individual" element in more detail and divide it into two separate parts, the first of which includes the effects of the organization on the individual (Marhraoui and El Manouar, 2017). In the second part, one of the factors that have a two-way effect on the organization and the individual is organizational agility (Pahlavan, 2017).

The word agility in the dictionary means fast, agile, active, and the ability to move quickly and easily, and the ability to think quickly and intelligently (Obradović, Todorović, and Bushuyev, 2018). In such an environment, each organization must be able to simultaneously produce different, short-lived products, redesign products, change production methods, and respond effectively to change. In view of having such capabilities, it will be referred to as an agile organization (BaniHashemi, 2016). Regarding the needs of organizational agility, various researchers have presented groupings of different indicators and requirements (Yahyazadehfar, Hosseini and AghaeiKordshami, 2014).They developed four main strategic dimensions that emphasize the achievement of agile competitiveness capabilities: enriching the customer, working together to increase competitiveness, organizing for key changes, and leveraging the impact of people and information (Azimi Mehrabadi and Aghajani, 2016). Agility can only be achieved through the integration of the hierarchy of customer needs within a framework of the organization's internal and external environment (Watts, 2017). This is achieved through a holistic view of the organization's advanced production technologies along with the internal capabilities that process them, as well as through the application of information systems technology (Neshat, Haddadi and Keykha, 2016). Agile production enablers are expressed as integration, competence, team building, technology, quality, transformation, participation, market, education, and welfare and comfort (Erfani Roghangar, Ghayyur Baghbani and Erfanian Khanzadeh, 2015).

For agile production, four basic aspects are considered under the headings of strategy, technology, systems, and manpower and include: 1- Production infrastructure (start-up and method change time, adaptability) (machine/station variety), workability of applicable operations), degree of machine adaptability,

interchangeability (ability to reschedule jobs), operation sharing, variety of material handling system, transfer speed, variety of components, attempt to change method, area sharing); 2- Market infrastructure (ability to reconfigure product composition, modularity of the index (ease of adding new components), ability to expand, volume range; 3- Individual infrastructure (training level, turnover); and 4- Information infrastructure (generalizability (standardization level)), Networking) (Jabbarisani, 2016).These activating principles lead to the growth of personal and individual characteristics such as creativity in the organization (Poldner, Dentoni and Ivanova, 2017). On the other hand, some studies such as Danish, Holbrook, Latif and Shaheen (2016), Bueno, Merino and Murcia (2016), Osadchy and Akhmetshin (2015) have shown that the factor of creativity can be caused by some other individual dimensions such as organizational culture that causes the creation of individual or collective creative thinking and for the success of the organization, knowledge as an asset must be exchanged between human beings (Bozorgzadeh and Babadi, 2016).

The concept of culture becomes important when managing wide-ranging changes in the organization. Organizational change is not just a change in structure but also a change in organizational culture (Galpin, Whitttington and Bell, 2015). Attempts to change the culture of the organization often fail when there is no proper understanding of the power of culture and its role in the organization, and this causes many current strategic designers to place special emphasis on identifying the core values of organizations (Bamgbade, Kamaruddeen and Nawi, 2017). Organizational culture is the perception that individuals have of their organization and is a concept that does not exist in the organization nor in the individual and certain characteristics that exist in an organization (Adams, Martin and Boom, 2018). Organizational culture reflects the common and fixed characteristics that distinguish organizations from each other. Organizational culture is the main values, assumptions, interpretations in the approaches that determine the characteristics of an organization and appear in the framework of organizational culture (Ismaeli Askari and Kamali, 2015). Due to the fact that among the resources and facilities of the organization, human resources are of special importance and attention to human resources of

the organization and society helps to achieve its goals, so the duty of managers and officials is to commit their employees to the organization (Asadi and Zahmatdoost, 2017).

Because committed manpower sees itself as belonging to the organization, considers the goals of the organization in the direction of its goals and strives to achieve the goals of the organization, and through this the organization can move towards progress and development (Dubey et al., 2017). Therefore, in order to fill the gap between studies conducted in the form of a structural model, finally according to the above, the main question of the present study is whether agility on organizational sustainability with the mediating role of organizational culture in first grade high school principals does it have an effect?

2. Definitions of Variables

2.1. Organizational Agility

The word agile is used in the dictionary to mean fast, agile, active, the ability to move quickly and easily, and the ability to think boldly and intelligently. Organizational agility is the ability that must be created in the organization to have the power needed to respond to change. Agility capabilities include the four dimensions of flexibility, speed, responsiveness and competence (Obradović, Todorović and Bushuyev, 2018).

2.2. Organizational Culture

Organizational culture reflects the common perception of organizational members that influences their behavior. In every organization, there are values, symbols, rituals and myths that are constantly changing over time. These shared values determine how employees perceive and respond to their world. (Bamgbade, Kamaruddeen and Nawi, 2017).

2.3. Organizational Sustainability

From an organizational perspective, organizational sustainability refers to a set of individuals or organizational characteristics of individuals that lead to

optimal growth of organizational performance without fluctuations in service delivery and production (Singh and Vinodh, 2017).

3. Research Background

Khdivi and Ostadi (2018) showed that the organization's human resources are one of the levers to create a sustainable economy in organizations through green innovation with creativity, innovation and environmental initiatives that can indirectly affect the competitiveness and makes the organization sustainable. Valipour Khatir, Safaei Qadiklaei and Mohammadi Hatchroud (2015) found that there is a correlation between organizational learning capabilities, organizational creativity and sustainability. Seyed Shamali and Sadeghian (2017) emphasized that agility in the organization causes stability and resilience. Ismaeli Askari and Kamali (2015) believe that organizational agility can lead to better organizational performance and in line with the organizational culture.

Yahyazadehfar, Hosseini and Aghaei Kordshami (2014) have found that individual factors such as individual agility and creativity are among the most important and fundamental factors affecting organizational sustainability. Sustainability is related to the organization's ability to monitor opportunities, changes, trends and risks in the external environment and is managed with the aim of balancing the financial, economic, social and environmental benefits of the organization in the long run. Ivory and Brooks (2018) showed that organizational agility is effective in promoting individual characteristics of employees such as creativity that can affect key factors such as sustainability in the organization.

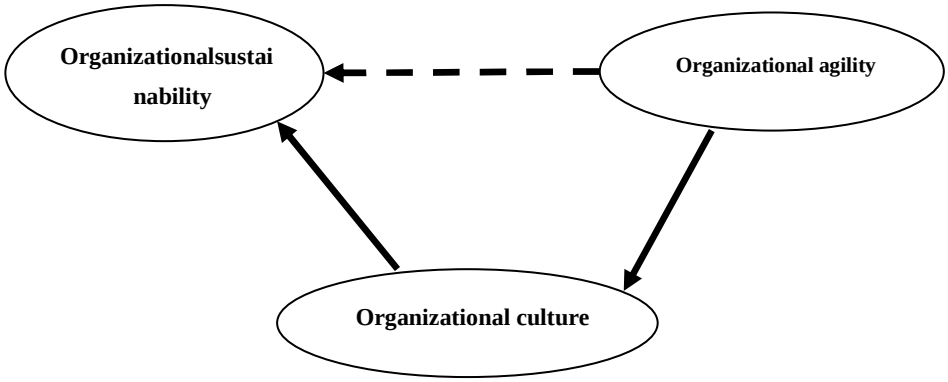

Figure 1: Hypothetical conceptual model of research

Adams, Martin and Boom (2018) found that organizational culture is promoted by employees that enhance the level of professional and personal characteristics as well as sustainability in the organization. Obradović, Todorović and Bushuyev (2018) showed that organizational agility and sustainability in the organization are two variables that are parallel and convergent. Dooley (2017) found that by developing individual and organizational creativity in employees can improve organizational sustainability. Singh and Vinodh (2017) showed that organizational agility along with improving organizational sustainability leads to optimal organizational growth. Poldner, Dentoni and Ivanova (2017) showed that individual and organizational creativity play a mediating role in the relationship between sustainability in the organization and overall organizational performance of employees. Dubey et al., (2017) showed that organizational culture influences the formation of performance measurement systems to measure organizational sustainability. Marhraoui and El Manouar (2017) have found that organizational agility plays a mediating role in the relationship between organizational innovation and organizational sustainability performance. Mitchell and Walinga (2017) showed that creativity, creative problem solving and insight are effective as the key drivers for organizational sustainability.

4. Methods

According to its purpose, this study was an applied research in terms of cross-sectional data collection and descriptive analysis and correlational research based on structural equation modeling. The statistical population of the present study consists of all 375 principals (125 principals) and deputy principals (250 deputies) of 125 first secondary schools in Babol.

To determine the sample size according to the number of observed variables and assigning a coefficient of 20 for each observed variable (14 variables observed in the model), and taking into account the possibility of incomplete questionnaires 280 people as a sample size available among all managers and school deputies were selected. In the executive process, before sampling, the subjects were given explanations about the purpose of studying and maintaining the confidentiality of the materials, and at the same time, informed consent was received from individuals about the participation of the samples in the research, then questionnaires were received from the samples. The structural regression equation modeling was used to analyze the obtained information. SPSS and Amos software were used for data analysis. The tools for measuring variables are:

a. Sharifi and Zhang Organizational Agility Questionnaire (2001)

The instrument used is an organizational agility questionnaire based on the Sharifi and Zhang model in 2001. This questionnaire measures the four dimensions of flexibility, speed, responsiveness and competence.The questionnaire consists of 29 items that have a five-point Likert scale (strongly disagree to strongly agree) and each item has a value between 1 and 5. Questions for each subcomponent (questions 1 to 6 related to speed /questions 7-13 related to competency/questions 14-19 related to responsiveness /questions 20-29 related to flexibility). The construct and content validity was confirmed by the manufacturers and the reliability was obtained by Cronbach's alpha method for 0.81 speed, 0.88 competency, 0.84 responsiveness, 0.87 flexibility and total 92.92. In the research of Mohammad Shafiei and Ahmadzadeh (2017), the validity of structure and content were confirmed by the manufacturers and the reliability was obtained by Cronbach's alpha method for speed 0.86, competency 0.77, responsiveness 0.87 and flexibility 0.88 and

total 0.86. The Cronbach's alpha reliability was obtained for speed of 0.84, competency of 0.82, responsiveness of 0.83, flexibility of 0.80 and total of 0.87.

b. Wake and Sutkfield Organizational Sustainability Questionnaire (2001)

The Organizational Sustainability Questionnaire was developed by Wake and Sutkfield (2001) and is in the form of 26 questions and a five-point Likert scale with few to many answer options. The five dimensions of organizational sustainability structure are titled performance sensitivity (8 items), mental concern about failure (6 items), commitment to flexibility (4 items), respect for specialization (4 items), and unwillingness to simplify interpretations (4 items) are introduced. In Iran by Pahlavan Sadegh (2017) the factor loads obtained for these factors are all desirable. Cronbach's alpha reliability coefficients was 0.93 for performance sensitivity factors, failure concern about failure 0.85, commitment to flexibility 0.89, respect for professionalism 0.84 and unwillingness to simplify interpretations 0.83 for the whole 0.96 has been obtained. In the present study, Cronbach's alpha reliability coefficients for performance sensitivity factors were 0.87, failure concern about failure was 0.80, commitment to flexibility was 0.81, respect for professionalism was 0.79 and reluctance to simplify interpretations was 0.81. 0 is obtained for the whole 0.92.

c. Denison Organizational Culture Questionnaire (2000)

Denison Organizational Culture Questionnaire (2000) which contains 36 items and components of the Partnership (1, 5, 9, 13, 17, 21, 25, 29 and 33), stability and Integrity (2, 6, 10, 14, 18, 22, 26, 30, 34), flexible (3, 7, 11, 15, 19, 23, 27, 31 and 35), missions (4, 8, 12, 16, 20, 24, 28, 32 and 36) and a Likert scale of five degrees (Strongly Disagree I strongly agree) and each item has a value between 1 and 5. The construct and content validity was confirmed by the creators and the reliability was obtained by Cronbach's alpha method for participation 0.86, stability and integrity 0.82, flexibility 0.89, mission 0.87 and for the whole 0.91. In the research of Rahimnia et al., (2008), the validity of the questionnaire was studied by reading related articles and books in the field of organizational culture, interviewing and consulting with management experts,

and Cronbach's alpha was used to assess its reliability. In the present study, the reliability of Cronbach's alpha method for participation was 0.84, stability and integrity was 0.85, flexibility was 0.89, mission was 0.80 and for total was 0.90.

5. Findings

First, normality of the data was confirmed by examining the statistical presuppositions using the Kolmogorov-Smirnov test. Also, after examining the normality of the data, the measurement model of the three research variables was reviewed and confirmed.

There is a significant correlation between the variables of organizational agility and organizational culture with organizational and social sustainability. There is a significant positive correlation between organizational agility and organizational culture with organizational and social stability in the subjects.

Table 1. Indicators of data analysis and variables

test	Acceptable values	values
$\chi 2/df$	<3	2.566
RMSEA	<0.1	0.038
GFI	<0.9	0.990
NFI	<0.9	0.987
CFI	<0.9	0.968
DF	-	157

According to table 1, the value of RMSEA is equal to 0.038, so this value is less than 0.1, which indicates that the mean squared error of the model is appropriate and the model is acceptable. Also, the value of chi-square in degrees of freedom (2.432) is between 1 and 3, and the values of GFI, CFI and NFI indices are almost equal to and greater than 0.9, which show that the measurement model of research variables is appropriate.

Table 2. Direct estimation of the model with the maximum likelihood method (ML)

variables	b	β	R^2	t	sig
Organizational agility on organizational sustainability	0.634	0.557	0.353	6.204	0.001
Organizational culture on organizational sustainability	0.412	0.387	0.159	5.854	0.001

According to table 2, organizational culture has a direct effect on organizational stability, also the values obtained from beta and values of common variance (R2) can be seen.

Table 3. Indirect estimation of the model using the bootstrap method

variables	B	At least	maximum	sig
Organizational agility on organizational sustainability through the mediating role of organizational culture	0.612	0.497	0.754	0.001

According to table 3 and the standardized values (β), obtained indirect path and organizational agility affect organizational and social sustainability.

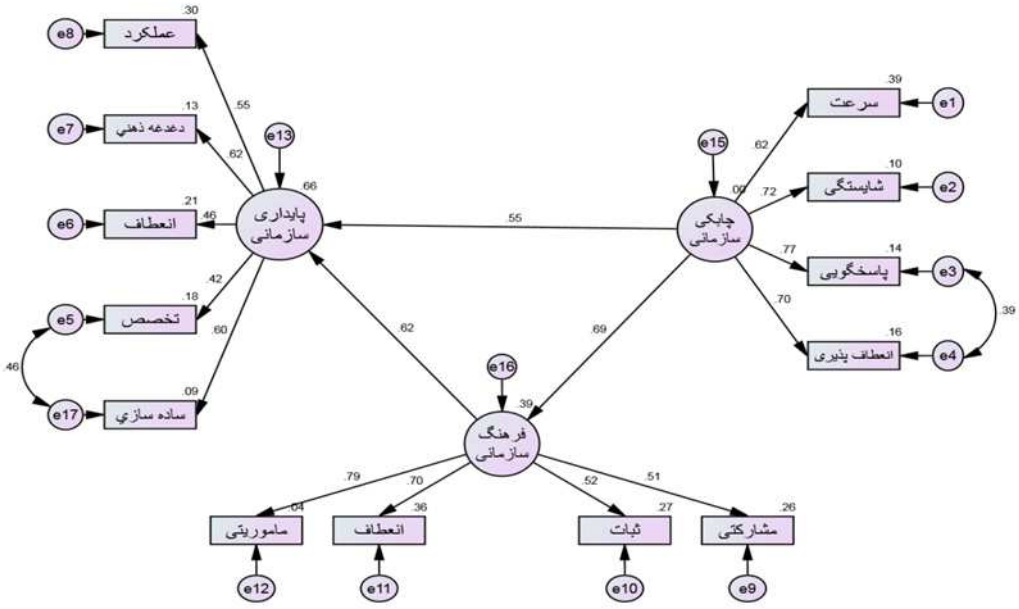

Figure 2. Final model tested with standardized statistics

6. Discussion and Conclusion

The aim of this study was to model the effect of agility on organizational and social sustainability mediated by organizational culture in young principals and deputies. Public secondary schools were 66 percent. These results are consistent with the findings of others. Among them, Asadi and Zahmatdoost (2017) showed that organizational empowerment and learning culture play a role in organizational agility. Azimi Mehrabadi and Aghajani (2016) showed

that organizational culture has a positive and significant effect on organizational agility and knowledge sharing. Knowledge sharing also has a direct impact on organizational agility. The results of examining the status of hypotheses confirm the mediating effect of knowledge sharing variable in relation to organizational culture and agility capabilities.

Bani Hashemi (2016) showed that there is a positive and significant relationship between the types of organizational culture (hierarchical culture, ethnic culture, market culture, bureaucratic culture) and organizational agility. Ethnic culture also has the highest coefficient of explanation among organizational culture items in the organizational agility variable. Neshat, Haddadi and Keykha (2016) showed that there is a significant relationship between entrepreneurial organizational culture and organizational agility in the Agricultural Bank of South Khorasan Province. Jabbari Sani (2016) showed that organizational culture has a mediating role in the relationship between transformational leadership style and organizational agility. Rezaei and Ebrahimi (2016) showed that organizational agility is directly affected by organizational culture. Ismaeli Askari and Kamali (2015 showed that organizational agility can lead to better organizational performance and in line with organizational culture.

Adams, Martin and Boom (2018) showed that organizational culture is promoted by employees at the level of professional personal characteristics as well as sustainability in the organization. Dobby et al., (2017) showed that organizational culture on the formation of performance measurement systems. It is effective for measuring organizational sustainability. Watts (2017) showed that the factors that create stability in overall organizational performance include the role of individual dimensions such as creativity and culture, as well as collective factors such as organizational agility. Galpin, Whitttington and Bell (2015) showed that employees' organizational culture can be considered an important factor in the sustainability of organizational performance.

Organizational agility usually means the ability of an organization to modernize itself, adapt and change rapidly as well as to succeed in a rapidly changing, ambiguous and irregular environment, which can lead to increased sustainability by creating an organizational culture (Asadi and Zahmatdoost,

2017). Agility does not conflict with sustainability, but on the contrary, for most organizations, agility requires sustainability (Obradović, Todorović and Bushuyev, 2018). Organizational agility requires two things. The first is dynamic ability which means the ability to move fast, agile, and responsive, and the second is stability which means a stable platform of things that do not change (Ivory and Brooks, 2018). It is this fixed backbone that becomes the springboard for the organization and acts as a lever-like point of organizational culture that can improve performance when everything else is constantly changing (Marhraoui and El Manouar, 2017). In small start-ups, sustainability is typically manifested in the founder and few people are active around the founder.

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