



ORGANIZATIONAL CHANGE CAPACITY: A SCALE DEVELOPMENT

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Abstract:

This study investigates the past literature on the organizational change capacity and then suggests new scales to assess the change capacity based on the past conceptual studies. Based on the 404 surveys from 202 firms, this study shows that organizational capacity consists of context, process and learning dimensions and each dimension covers different aspect of change capacity.

Keywords:

Change Capacity, Organizational Change, Scale Development

JEL Code:

M10, M19

1. Introduction

Organizational change capability (OCC) is one of the most prevalent research areas in the organizational change management literature. As a result, organizations try to develop their change capacities to be more competitive in the markets. Here, researchers proposed some processes and instruments to improve the change capacities of the organizations (Gravenhorst, Werkman and Boonstra, 2003; McGuinness and Morgan, 2005). In addition, some researchers offered scales to measure the OCC (Judge and Douglas, 2009). Interestingly, most of the studies followed the Judge and Douglas's (2009) scales to test the role of OCC on the firm performance or resilience. While the study of Judge and Douglas (2009) is critical to leverage the OCC in the literature, new scales should be developed and tested to improve the OCC concept better. In this respect, some studies recently emphasized the potential of the study of Soparnot (2011). Soparnot (2011) conceptually suggested three dimensions to assess the OCC, namely context, process, and learning aspect of change capacity. Nevertheless, those dimensions were not operationalized and then tested in an empirical study. Accordingly, the goal of this study to develop question items and then test the validity and reliability of these question items to measure OCC from Soparnot' (2011) conceptual perspective.

2. Background

The term OCC has been receiving increasing attention from both management research and practice (Judge & Elenkov, 2005). For example, Gravenhorst Werkmann, and Bonnstr (2003) focused on multiple aspects of organization and change process in 104 organizations represented by 495 questionnaires in Netherland. They defined six aspects change capacity, involving: goals and strategy of the organization, structure, culture, technology, job characteristics, and power relations. They also identified ten aspects of change process itself: goals and strategy of the change, its technological aspects, tensions within and between groups in the organization, the timing of the process, information supply, generation of support for change, the role of change managers, the role of line managers, expected outcome, and support for change. McGuinness and Morgan (2005) conceptualized OCC through three components, such as a proper basis for continuous change, the ability to form it, and maintaining the energy of it. They showed how OCC is associated with market and learning orientation.

Meyer and Stensaker (2006), in their conceptual paper, examined how organizations can create a capacity for change, and presented common change process prescriptions in two groups. First group is the most cited one in the literature which is including framing, participation, pacing, and sequencing. Second group is mostly illustrated with sustainable change capacity and listed like; routinizing, recruiting, pacing and sequencing.

Judge and Blocker (2008) discussed how OCC is different from other change related constructs, such as readiness for change and organizational adaptive capacity. They also discussed how OCC is a precursor to strategic ambidexterity. They integrated eight dimensions of organizational change into four organizational polarities, such as a leader and follower polarity, an innovation and accountability polarity, a unitary and distributed leadership polarity, and a thinking and action polarity.

Klarner, Probst, and Soparnot (2008) analyzed the OCC of the World Health Organization through the part of context, change process and learning from change. They found that OCC permits it to better deal with the elements of change capacity, which improves the adaptation and survival.

Judge and Douglas (2009) systematically developed a change capacity construct consistent of 32 question items through investigating 3,600 surveys in 161 organizational units. They found eight distinct but interrelated dimensions of OCC, such as trustworthy leadership, innovative culture, involved mid-management, trusting followers, capable champions, system thinking, effective communication and accountable culture.

Soparnot (2011) investigated the automotive industry to determine the dimensions of OCC by using semi structured interviews and database screening. He identified three dimensions of OCC, such as process, context, and learning. The process dimension involves transformational leadership, incremental implementation, mutually created change processes, formation of openness, perceived authenticity of change. The context dimension includes the importance of change, structural flexibility, cultural consistency, trust, practices based on agreement, capabilities of individual learning. The learning dimension covers the development through experience, renewal through experimentation, transfer of organizational knowledge.

3. Research Methodology

3.1. Measures

We used itemized rating scale from 'extremely low' (1) to 'extremely high' (5) to assess the context, process, and learning aspect of OCC. For context, process, and learning aspects of OCC, we developed new questions derived from the conceptual study of Soparnot (2011). Table 1 demonstrates our question items.

Table 1 Question Items

Context dimension

Cd1: To what extent does your organization give value to the change?

Cd2: To what extent does your organization have a cohesive culture that facilitates the condition of change?

Cd3: To what extent does trust between those undergoing change (participants) and those performing change (promoter) exist in your organization?

Cd4: To what extent does your organization encourage the participation and taking of initiatives by the people?

Cd5: To what extent does your organization facilitate learning capability by training, internal mobility, and proactive problem-solving strategies?

Cd6: To what extent does your organization use subcontracting?

CD7: To what extent does your organization use semi-autonomous teams?

Process dimension

Pd1: To what extent does management the creator of change by personifying that change, such that it carries the change of identity and produces reasons for it, so participants will accept its general significance?

Pd2: To what extent does management the creator of change by creating a team of “supporters” who will ensure the propagation of that change?

Pd3: management the creator of change by spreading the vision of change?

Pd4: To what extent does the perception of people changing the outcome by solving the problem that the project was created for and, more generally, for the benefits that outcome offers to the organization and its participants?

Pd5: To what extent does the perception of people changing procedures as various stages and that path taken to achieve the ultimate objective?

Pd6: To what extent does change created by the exercise of group construction, collective invention and learning about the exchanges of views and negotiation?

Pd7: To what extent does your organization carrying out a gradual transition during which participants follow the rhythm that enables them to manage change better using their own representations and their own ways of behaving?

Pd8: To what extent does the change process visible in your organization?

Pd9: To what extent does your organization fostering communication and dialogue to make the change process more visible in your organization?

Learning dimension

Ld1: To what extent does people observe their practices and learn from them to limit the number of similar mistakes in the future?

Ld2: To what extent does the people in your organization learn from its past?

Ld3: To what extent does people question their actions and think about improvements?

Ld4: To what extent does the guiding values that lead to the adoption of the practices often challenged?

Ld5: To what extent does people experiment to invent new solutions and consequently abandon other certain practices?

Ld6: To what extent does people experiment to adopt new practices and share new knowledge across the board?

Ld7: To what extent does those who run the organization develop mechanisms for managing the diffusion of knowledge (via the promotion of initiatives, the creation of discussion clubs, etc.)?

Ld8: To what extent does people informally impart and spread knowledge throughout the organization?

3.2. Sampling

We gathered the data from MBA's and graduate programs at five universities in Istanbul. We first clarified the purpose of our research and requested those students to participate voluntarily in our study. We then invited each student to choose people in their firms to respond our surveys. We contacted with 243 firms, and 232 of them agreed to participate in our survey study. Of the survey respondents, 223 out of 232 firms resumed the questionnaires. As we demanded multiple informants from each firm, we removed 21 firms that answered with only one survey from our data set. As a result, our sample comprised of 202 firms and 404 surveys from a variety of industries.

3.3. Measure Validity and Reliability

After the data collection, we performed an exploratory factor analysis by using a varimax rotation to evaluate the unidimensionality of each aspect of OCC. As demonstrated in Table 2, we obtained three factors for OCC. Interestingly, most of the question items of the context aspect of OCC were loaded unto process aspect of the OCC. To evaluate the discriminant validity, we performed a series of two-factor models, suggested by Bagozzi, Yi, and Phillips (1999). We compared the fit of the restricted models with the original model by testing six models using AMOS 4.0. As shown in Table 3, the chi-square change ($\Delta\chi^2$) in each model, constrained and unconstrained, were significant, $\Delta\chi^2 > 3.84$, demonstrating the acceptable discriminant validity.

Table 2 Results of Exploratory Factor Analysis

Variables	Items	F1	F2	F3
Process aspect of OCC	Pd1	.78		
	Pd2	.81		
	Pd3	.80		
	Pd4	.74		
	Pd5	.68		
	Pd5	.66		
	Pd7	.74		
	Pd8	.74		
	Pd9	.78		
	Cd1	.60		
	Cd4	.65		
	Cd5	.58		
	Learning aspect of OCC	Ld1		.80
Ld2			.73	
Ld3			.76	
Ld4			.73	
Ld5			.73	

	Ld6	.69	
	Ld7	.76	
	Ld8	.61	
	Ld9	.65	
Context aspect of OCC	Cd2		.89
	Cd3		.70
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Eigenvalue	12.73	1.55	1.29
Percentage of variance explained	55.36	6.74	5.60

Table 3 Discriminant Analysis of the Construct Measures

Variables	Unconstrained (χ^2 /d.f.)	Constrained (χ^2 /d.f.)	$\Delta\chi^2$
Process aspect vs. Learning aspect	1040.39/188	1086.5/189	46.11
Process aspect vs. Context aspect	481.82/76	592.34/77	110.52
Learning aspect vs. Context aspect	244.03/43	374.49/44	130.46

Further, we performed a Confirmatory Factor Analysis (CFA) to assess all question items by applying AMOS 4.0. We found that measurement model fits the data fairly well: $\chi^2(227) = 1173.22$, comparative fit index (CFI) = .89, incremental fit index (IFI) = .89, and root-mean-square error of approximation (RMSEA) = .09. In addition, we found that all items loaded significantly on their own variables, providing support for convergent validity.

Table 4 illustrates the correlation among three variables. The comparatively low to moderate correlations offer additional proof for discriminant validity. Also, coefficient alphas, average variance extracted, and composite reliabilities, are well-beyond the threshold levels suggested by Fornell and Larcker (1981). In addition, as implied by Fornell and Larcker (1981), the squared root of AVE for each variable is higher than correlations between pairs of variables, suggesting discriminant validity.

Table 4 Correlations and Descriptive Statistics

Mean	S.dev.	Variables	1	2	3
3.05	.73	1 Context aspect of OCC	(.67)		
3.28	.60	2 Process aspect of OCC	.38***	(.74)	
3.80	.56	3 Learning aspect of OCC	.32***	.71**	(.77)

Composite reliability	.69	.94	.92
Variance extracted	.46	.55	.59
Cronbach's α	.68	.95	.93
Inter-rater agr. (r_{wg})	.72	.73	.72

* $p < .1$, ** $p < .05$, *** $p < .01$

Diagonals show the square root of AVEs

4. Conclusion

This study demonstrated that OCC is a multidimensional construct composed of context, process and learning dimensions. We showed that that none of these three aspects of OCC are orthogonal, but they accompany one another in a reciprocally underlining way (i.e., these dimensions are intertwined, establishing a “chain” of resources of the OCC).

Also, this study showed that OCC is a combination of each aspect. Such that, this study highlighted the profile view of the OCC. Here, OCC components can be deemed individually in a profile approach, noting that those dimensions may differ in their impacts, they may not follow a stable and cohesive way, and hence, can offer better interpretability for the individual effects of each dimension. Indeed, OCC cannot be conceptualized as an aggregate multidimensional construct as mentioned in the past studies. Past studies used the mean values of those dimensions to assess the OCC. While such an attempt is suitable when those dimensions are highly correlated and they uniformly affect the OCC construct, current evaluation of OCC can mask the interaction between those dimensions such that a respondent may report high in two aspects (e.g., context, process) and low in the other aspect (e.g., learning).

Finally, this study demonstrated that OCC allows a firm to adapt more efficiently and rapidly than its competitors for changing circumstances and evolving opportunities (Judge & Douglas, 2009). In this respect, OCC, a part of organizational dynamic capabilities, is important for all forms of organizations and is related to higher organizational performance (Ramezan et al., 2013).

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