

Competing Value Framework and Public Administration: Managerial Insights, Theoretical Reflections and Practical Implications from Italy

Antonio Botti¹, Massimiliano Vesci¹

¹Department of Management & Innovation System, University of Salerno, Fisciano, Italy

Correspondence: Antonio Botti, Department of Management & Innovation System, University of Salerno, Via Giovanni Paolo II, 132, (84084) Fisciano, Italy.

Received: November 22, 2017

Accepted: January 2, 2018

Online Published: January 18, 2018

doi:10.5539/ibr.v11n2p147

URL: <https://doi.org/10.5539/ibr.v11n2p147>

Abstract

Competing Value Framework (CVF) is a framework used to assess organizational culture in public administration and it is widely used in health services research to assess organizational culture as a predictor of quality improvement, employee and patient satisfaction, and team functioning. At present the CVF framework has never been tested in contexts where reforming action is vague and is characterized by changes and continuous reflections on the changes introduced. The present study try to fill this gap analysing how CVF works in a context characterized by continued uneven homogeneous reforms. The paper has theoretical and practical implication depicting also suggestions for politicians.

Keywords: culture, organizational culture, competing value framework, public administration, reforms, Italy

1. Introduction

Organizational culture is a key element underpinning any innovative program (Ostroff, Kinicki, & Tamkins 2003). Schein (1999) highlights that organizational culture is hard to schematize, underlining that sufficiently solid hypotheses to test in this field have not been developed yet. Schein (1999) sustains that for a better understanding of organizational culture the description and the analysis of situations play a key role. In literature, a model used to assess organizational culture, contextual factors and relationships within organizations is the Competing Value Framework (Quinn & Rohrbaugh 1983; Quinn 1988; Denison & Spreitzer 1991; Cameron & Freeman 1991; Quinn & Spreitzer 1991; Scott, Mannion, Marshall, & Davies, 2003; Helfrich, Li, Mohr, Meterko, & Sales, 2007). This model has been tested and used in numerous settings with different categories of employees (Quinn & Kimberly 1984; Quinn & McGrath 1985; Quinn & Spreitzer 1991; Zammuto & Krakower 1991; Cameron & Freeman 1991; Di Padova & Faerman 1993; Helfrich et al. 2007). However, in some cases, Authors modified model's dimensions (Helfrich et al. 2007) to reach a better fit with the particular field of application. Furthermore, it is well known in literature that culture is a direct consequence of context (Hofstede 1997). At present the CVF framework has never been tested in contexts where reforming action is vague and is characterized by changes and continuous reflections on the changes introduced. The present study aims to analyze the functioning of the tool with regard to a context characterized by brief duration of political leadership due to high government turnover (Mele & Ongaro 2014), and continued uneven homogeneous reforms. The paper aims to discuss the modifications brought about by context. Suggestions are drawn out for policy makers.

2. Theoretical Background

2.1 Organizational Culture

One of the first definitions of organizational culture was that of Pettigrew (1979, p. 572), who described the concept as a system of "beliefs, ideology language, rituals and myths" that influence the behaviour of an organization. However, scholars proposed several definitions of organizational culture. According to Ostroff et al. (2003) it represents the set of values, norms and beliefs shared by the members of a specific organization, which has a significant influence on the way employees relate to each other and with their work environment. Schein (1985a) considers culture as a set of psychological regulations that directly influence the action of the members of an organization. Moreover for the Author (Schein 1985b), organizational culture is related to the routine procedures that a group learns over time and passes on to new staff members in order to solve problems.

Schein's perception (1985a) is in line with Brown's (1998) assumption which includes in the definition of organizational culture not only values and beliefs, but also the expertise that an organization has developed over time, underpinning how staff members deal with problems. These positions are close to those of Hofstede (1980, p. 25) who considers organizational culture as "the collective programming of the mind which distinguishes the members of one human group from another".

Schein (1992) describes organizational culture as a social force difficult to identify but very powerful to arouse desired behaviours. Subsequently, Hofstede (1997) changed his position on organizational culture, considering it strictly related to the core values distinguishing the members of an organization. Consequently, the Author uses the term *practices* in order to define social and cultural phenomena.

In addition, Schein (1992) considers organizational culture as a multidimensional construct distinguishing between different layers of culture. Based on the difficulty of assessing organizational culture due to its multiple dimensions (Schein, 1992), Hogan and Coote (2014) found that different layers of organizational culture, particularly norms, artefacts, and innovative behaviours, partially mediate the effects of values that support innovation on firm performance. Similarly, Naqshbandi, and Kamel (2017) found that the ability of recognize and use knowledge available outside firm's boundaries mediates the relationship between organizational culture types and open innovation types.

Nevertheless discussing organizational culture is still on the spot especially when facing with topics on the border (Naqshbandi et al., 2015; Feola, Vesci, Botti, & Parente, 2017) or with complex settings (Jennings, 2012; Taylor, 2014). In fact, in line with earlier considerations, empirical evidence shows that organizational culture is a powerful means to induce desired organizational outcomes (Hogan, & Coote, 2014). Homburg and Pflesser (2000) addressed marketing orientation from a cultural perspective. They highlighted an explicit relationship between values and artifacts that support market orientation and market-oriented behaviours. Gregory, Harrisb, Armenakis and Shook (2009) pointed out that organizational culture affects directly customer satisfaction and indirectly organizational effectiveness; at the same time employees' attitude mediates the relationship between organizational culture and organizational effectiveness. This result is an evolution of the study of Siehl and Martin (1990) which underlined that culture influences employees' attitudes and those attitudes, in turn, impact organizational effectiveness. Zheng, Yang and McLean (2010) underlined that knowledge management fully mediates the impact of organizational culture on organizational effectiveness confirming that organizational culture acts differently in different contexts. Focusing on behaviours, O'Reilly III, Chatman and Caldwell (1991) suggested that organizational culture affects employees' behaviours beyond formal control systems, procedures, and authority.

Organizational culture assessment has been based predominantly on the *Competing Values Framework* (CVF) as proposed by Quinn and Rohrbaugh (1981). This framework has been applied in a wide range of managerial and organizational studies, including the investigation of organizational culture, leadership styles and effectiveness, organizational development, human resource development, and quality of life (Quinn, & Kimberly 1984; Quinn, & McGrath 1985; Quinn, & Spreitzer 1991; Zammuto, & Krakower 1991; Cameron, & Freeman 1991; Di Padova, & Faerman 1993, Gregory et. al. 2009).

2.2 The Competing Values Framework

The CVF is an extensively used model in the area of organizational culture research (Yu, & Wu 2009). The framework was originally developed by Quinn and Rohrbaugh (1981) to identify potential criteria for evaluating organizational effectiveness. Based on data provided by a panel of organizational experts, Quinn and Rohrbaugh (1983) used multidimensional scaling to ascertain the basic value dimensions underlying conceptualizations of organizational effectiveness. The resulting spatial model showed three superordinate value continua: flexibility-control (F/C), internal-external (I/E), and means-ends (M/E). The F/C continuum represents the way organizations handle their internal components while simultaneously meeting the external challenges of competition, adaptation, and growth. The dimension synthesizes how much an organization emphasizes centralization and control over organizational processes as opposed to decentralization and flexibility. The I/E continuum represents how well the organization manages the demands for change arising from its environment while simultaneously maintaining continuity. This dimension of competing values expresses the degree to which the organization is oriented toward its own internal environment and processes focusing on the well-being and development of people versus the external emphasis on the overall competitiveness of the organization in sometimes changing environment. The M/E continuum is related to organizational means and ends, from an emphasis on important processes (e.g., planning and goal setting) to an emphasis on outcomes (e.g. productivity).

In a later study Quinn (1988) showed that two of these superordinate continua, control-flexibility and internal-external, were sufficient to describe the effectiveness construct. In summary, the framework posits that two dimensions, each representing alternative approaches to basic challenges that all organizations must resolve in order to function (Denison, & Spreitzer 1991), can characterize most organizations. The combination of the two superordinate continua produces four quadrants that identify four major models of organization and management theory (Quinn 1988):

1. Human relations places a great deal on emphasis on flexibility and internal focus, and stresses cohesion, morale, and human resource development as criteria for effectiveness;
2. Open system emphasizes flexibility and external focus, and stresses readiness, growth, resource acquisition and external support;
3. Rational goal emphasizes control and external focus, and views planning, goal setting, productivity and efficiency as effective;
4. Internal process emphasizes control and internal focus, and stresses the role of information management, communication, stability and control.

The competing values literature suggests that the content of these quadrants reflects the primary value orientations of most organizations (Kalliath, Bluedorn, & Gillespie 1999) and consequently these dimensions are not mutually exclusive. Every organization expresses each dimension to some degree, yet most organizations emphasize some of these dimensions more than others (Quinn, & Cameron 1983; Zammuto & Krakower 1991). For example, organizations that stress trust and sense of belonging tend to be prevalent in the human relations quadrant; leadership style of this type of organizations reflects teamwork, participation and empowerment. Organizations that emphasize adaptation to the external environment tend to be dominant on the open systems dimension; in this type of organizations leaders support strategies of flexibility, growth, innovation, and creativity. Organizations that stress efficiency, performance, task focus, and goal clarity tend to be dominant on the rational goal dimension; organization's leaders focus on tasks and clarity of goals because they believe these values support efficiency and productivity. Internal process organizations emphasize the importance of routine, centralization, control, stability, continuity, and order. Employees are rewarded for observing the rules; in this type of organization leaders measure and document several aspects of work, believing that routine and formality lead to stability, order, and continuity (Quinn, Faerman, Thompson, & McGrath, 1990).

Based on former organizational culture studies in the literature, Cameron and Quinn (2006, p. 28) labelled the four categories respectively as "Clan", "Adhocracy", "Market" and "Hierarchy".

Organizations in which internal focus and control prevail (commonly called hierarchical cultures or bureaucratic cultures) adopt centralized authority over organizational processes, have a clear organizational structure, standardized rules and procedures, strict control, and well defined responsibilities, respect formal hierarchy and adhere to rules. These organizations require a stable and predictable environment. Organizations in which internal focus and flexibility prevail (usually classified as team or clan cultures) encourage broad participation by employees, give emphasis to teamwork and empowerment, and make human resource development a priority. The clan culture is full of shared values and common goals, an atmosphere of unity and mutual help, and an emphasis on employee progression. Organizations in which external focus and flexibility prevail (usually branded adhocracy or entrepreneurial cultures) display creativity and innovativeness. Finally, organizations within which external focus and control prevail (usually labelled market or rational cultures) are characterized by clarity of tasks and goals. Such organizations address attention to efficiency and measurable outcomes.

The CVF model does not specify a preferred organizational culture; it hypothesizes that all four culture types operate at an organizational level and remain relatively stable over time (Denison, & Spreitzer 1991). In fact, the model assumes that the four categories of culture pervade many aspects of an organization, influencing management conduct, the values that link workers with each other and, finally, organizational priorities. Therefore, it is reasonable to expect that the prevalent type of culture could emerge from an analysis of the employees conducted at various levels of the organization (Quinn, & Rohrbaugh 1983; Denison, & Spreitzer 1991).

In order to evaluate the organizational models and the associated culture, the CVF model scales some particular items. The original 16-item tool first validated by Quinn and Spreitzer (1991), used survey data retrieved from executives of public utilities. They concluded that the CVF was reliable and had good construct validity. Later, Kalliath et al. (1999) validated the CVF model in a healthcare setting by administering a 16-item, seven-point Likert-scale version of the classic CVF to 300 managers and supervisors from a multi-hospital system. Their

conclusions were generally consistent with the four-subscale CVF, although they found a high, positive correlation ($r = 0.73$) between the hierarchical and entrepreneurial subscales. Subsequently Helfrich et al. (2007) used exploratory and confirmatory factor analyses to examine the underlying structure of data from a CVF tool. They analysed cross-sectional data from a work environment survey conducted in the Veterans Health Administration. The study population comprised all staff in non-supervisory positions. The Authors found that entrepreneurial, team, and rational subscales had higher correlations across subscales than within, indicating poor divergent properties. Exploratory factor analysis revealed two factors, and results from confirmatory factor analysis suggested that the two-subscale solution provides a more parsimonious fit to the data as compared to the original four-subscale model.

Although models based on the CVF are the most frequently used in healthcare research to assess organizational culture (Gershon, Stone, Baken, & Larson, 2004), the literature review shows that there has been limited analysis of CVF tools in different contexts with diverse setting. In fact, it is not clear whether the same CVF model is viable when applied to others organizations. The studies mentioned above suggest that there may be problems applying conventional CVF subscales to non-supervisors. Employees did not appear to distinguish between entrepreneurial, team and rational cultures. Probably, a model based on items that generate four subscales cannot be applied to all contexts and scholars (Helfrich et al., 2007). To the best knowledge of the Authors the CVF framework has never been tested in organizations where the organizational rules often changes.

3. Italian Public Administration: An Open-ended Construction Site

Napoleonic countries have a strong administrative tradition (Barzelay & Gallego 2010, Ongaro 2009) that hinders the processes of change in the public sector. As Mele and Ongaro (2014) said Italy is a privileged context in which to analyse the processes of modernization of Public Administrations. Indeed, with its 18 Governments since 1990 today, Italy represents a critical case (Yin 2009) to study the effects of tumultuous alternation in government on public management reform trajectory. During this period, the Italian government has been affected by numerous and recurring regulatory interventions aimed at improving public effectiveness and efficiency (see table 1 for an overview of the main Italian reforms determined by law). The interventions of the Italian legislator can be considered “reform” as defined by Pollit and Bouckaert (2004, p.8): “Public management (PM) reforms consist of deliberate changes to the structures and process of public sector organisations with the objective of getting them (in some sense) to run better”. In other words, reforms are all the measures aimed at reshaping the Public Administration (Ongaro, 2009). More specifically, in Italy changes in the rules of operation of Public Administration are the consequence of Government change. Ongaro (2009, p. 10-11) studying reforms path highlights that “The overall impacts of reforms seem to point to some significant degree of (process and system) change in the public sector, but this change is patchy, both within each level of government and throughout the levels of government”. He finds four dimensions in which reforms produced changes (Ongaro, 2009, p. 20):

1. “Financial management trajectory (it includes the contents and process of budget formulation as well as the accounting systems);
2. Audit and performance measurement trajectory (the actors, forms and procedures of auditing public sector organizations; the contents of the information about performance of public sector organizations, and their use);
3. Personnel reform trajectory (the features of the civil service in term of the distinctiveness of norms and rules regulating the civil service; the processes whereby civil servants are recruited, evaluated, promoted and rewarded; the procedures of appointment and removal and the decision powers of managers; the responsibility on personnel management and training);
4. Trajectory in organization (encompasses both the overall macro-level configuration of the public sector, in terms of degrees and modalities of specialization and the instruments and mechanism of coordination, as well as in terms of extent of vertical and horizontal decentralization, and the micro-level configuration of the organizational design at the level of individual public sector organizations)”.

In the period 1990-2008 Ongaro (2009) identifies six regulatory measures in the financial management area, three regulatory measures about audit e performance management, six regulatory measures about personal management, and nine regulatory measures referred to the organization structure. In the subsequent period (2009-2015), further regulatory measures interested Italian Public Administration and the more relevant are the legislative decree 150/2009, known as “Brunetta reform”, and the last reform approved in 2015 (L. 124/2015), known as “Madia reform”.

The Legislative Decree 150/2009 intervened incisively on the management of Public Administrations with very broad and pervasive dispositions. The core of the reform was the “Performance Plan” recommending programming (ex-ante) and evaluation (ex-post) in Public Administration. The reform predisposed the creation of a National Commission (CIVIT) responsible for the dissemination of guidelines and best practices, while the assessment was assigned to an independent committee (OIV). The evaluation process involved process results (output), impact on community (outcome) and organizational wellbeing.

At the beginning of 2015, Renzi government received a mandate from the Italian Parliament to draft Public Administration reform (law 124/2015). In contrast with Legislative Decree 150/2009, Italian Parliament set out new principles to reform Italian Public Administration that are still being implemented. As a result, the Italian Public Administration is an organization in continuous change.

This paper aims to fill the gap in the literature represented by the absence of studies on how CVF works in a context in which reforms do not last long. A goal of this paper is to understand if frequently changes in the regulatory system affect organizational culture assessed by the CVF framework. Suggestions for policy makers are drawn out based on effects legislative reforms spread out on the climate and organizational culture.

Table 1. Main Italian reforms between 1990-2015

Financial management	Audit and performance measurement	Personnel management	Organization
Legislative Decree 77/95 Law 94/97 followed by Legislative Decree 279/97 Legislative Decree 76/00 Legislative Decree 267/00 DPR 97/03 Law 112/08 Law 42/09 Law 196/09 Legislative Decree 126/14	Direttiva del Primo Ministro Ciampi 27.01.94 (introduzione della carta dei servizi) Legislative Decree 20/94 and 24/94 Legislative Decree 286/99 Legislative Decree 150/09	Legislative Decree 29/93 Legislative Decree 80/98 Legislative Decree 165/01 Law 145/02 Legislative Decree 343/03 Law 168/05 Legislative Decree 150/09 Law 124/2015	Law 142/90 Law 241/90 Legislative Decree 29/93 Law 59/97 Legislative Decree 112/98 Legislative Decree 300/99 Legislative Decree 303/99 Legislative Decree 267/00 Law 137/2002 Legislative Decree 150/09 Law 124/2015

Adapted from Ongaro (2009)

4. Methods and Data

This study analysed the staff of four local offices of a national public agency¹. To conduct the present research, a closed end questionnaire was prepared and submitted to the sample of interviewees who were then asked to indicate the extent of their agreement/disagreement with the statements on a 7-point Likert scale.

The questionnaire contained fourteen items adapted from former studies that used the CVF in three different contexts (Cameron, & Freeman 1991; Quinn, & Spreitzer 1991; Zammuto, & Krakower 1991). The wording of some items was adapted to Italian language to improve readability and comprehension.

The questionnaire was submitted to all the staff of four local offices of a national public agency. Incomplete questionnaires (5) were discarded.

The final data set consisted of 85 respondents with the characteristics specified in Table 2.

Table 2. Responding sample

Variable (N=85)	Category	N(%)
Gender	Male	45 (52.9%)
	Female	40 (47.1%)
Managerial Status	Non-leadership	68 (80.0%)
	Team Leaders	7 (8.2%)
	Supervisor	5 (5.9%)
	Manager	5 (5.9%)
Salary Scale	A	3 (3.5%)
	B	30 (35.3%)
	C	46 (54.1%)
	D	1 (1.2%)
	Manager	5 (5.9%)

Three series of analyses on the data have been carried out. First, starting from the classical CVF composition in four subscales, an item analysis has been done to examine subscale reliability and assess the divergent and

convergent properties of the subscales, i.e. the extent to which items correlated within subscales versus across subscales. Second, in order to determine the underlying structure of the items, an exploratory factor analysis (EFA) was performed. Finally, a confirmatory factor analysis (CFA) has been implemented to assess and confirm psychometric properties (i.e., convergent and discriminant validity) of the subscales.

5. Findings

5.1 Item Analysis: the Abandonment of a Four Subscales Structure

Item-to-total correlations met suggested minimum thresholds of 0.20 for all four subscales, indicating that individual items are strongly correlated with their subscales (Table 3). Data showed that item correlation to other subscales is also frequently greater than 0.20. In particular, for the entrepreneurial subscales, correlations to other subscales exceeded the threshold point for eight of the ten items of the other subscales; for the hierarchical, correlation to other subscales exceeded the threshold point for all ten residual items; and for the team and rational subscales, correlations to other subscales exceeded the threshold for nine of the ten items of the other subscales, suggesting poor divergent validity.

Cronbach's alpha for the entrepreneurial, team, and rational subscales is above the conventional thresholds of 0.80. Hierarchical subscales do not meet the minimum of 0.7 showing an alpha statistic of 0.65.

In any event, the item analysis as a whole evidences a low discriminating and/or converging capacity of the various items in the subscales. Cronbach's alpha of the hierarchical subscale is below the predicted minimum highlighting scarce reliability. Evidently, the scale described factors that were insufficient or not mapped exclusively to that particular scale. The outcome implies that a four-factor model does not adapt well to data. Consequently, in order to assess a better fit of the tool an exploratory factor analysis was performed.

5.2 Exploratory Factor Analysis: the Proposition of a Three Subscales and Three Factors Structure

In order to determine the underlying structure of the items an EFA analysis was carried out prior to the analysis of the measurement model. A principal component analysis method with oblique (promax) rotation was put in place with the aim of obtaining several theoretically meaningful factors, given that oblique rotation assumes that factors are correlated to one another, which is more realistic particularly in the social sciences (Hair, Black, Babin, Anderson, & Tatham, 1998). The components were extracted applying the rule of Kaiser (Eigenvalue > 1).

Principal component analysis revealed a three-factor solution (tab. 4). The items from team and entrepreneurial subscale loaded on the first factor (item eight was eliminated due to its low communality). The items with the highest factor loadings on the first factor are item three ("Managers in my facility are warm and caring. They seek to develop employees' full potential and act as their mentors or guides"), item six ("Managers in my facility are coordinators and coaches. They help employees meet the facility's goals and objectives") and item one ("My facility is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks"). These items stress the importance of supporting employees, fulfilling potential and developing high morale.

The items with the lowest factor loadings on the first factor are item nine ("The glue that holds my facility together is formal rules and policies. People feel that following the rules is important"), and item four ("Managers in my facility are risk takers. They encourage employees to take risks and be innovative") and item twelve ("My facility emphasizes growth and acquiring new resources. Readiness to meet new challenges is important").

This factor has been called "dynamism" as it includes different aspects, such as flexibility, shared objectives, attention to human resources (typical of human relations and associated with clan culture), dynamism, risk-taking and tension towards new goals (typical of open systems associated with hierarchical and entrepreneurial culture).

Two of the three items of the rational subscale – item fourteen ("My facility emphasizes competitive actions and achievement. Measurable goals are important") and item ten ("The glue that holds my facility together is the emphasis on tasks and goal accomplishment. A production orientation is commonly shared) – load on the second factor. This second factor has been defined "task orientation", since the attention to goal setting, to productivity and to measurability are included in it.

Two of the four items of the hierarchical subscale – item two ("My facility is a very formalized and structured place. Bureaucratic procedures generally govern what people do") and item five ("Managers in my facility are rule-enforcers. They expect employees to follow established rules, policies, and procedures.") – load on the third factor. Since this loading emphasizes formal rules, bureaucracy and procedures, this factor has been named "bureaucracy".

Table 3. Item analysis for culture items and Competing Value Framework subscales

	Mean	SD	Item correlation to subscales			Cronbach's α
			Entrepreneurial	Hierarchical	Team	
Entrepreneurial	3.86	1.30				0.73
d1) My facility is a very dynamic place and leaves space for personal initiatives	3.76	1.62	0.43	0.28	0.54	0.41
d4) Managers and office managers in my facility are risk-takers. They encourage human resources to take risks and to innovate procedures to achieve outcomes.	3.59	1.79	0.51	0.32	0.70	0.56
d8) The glue that holds my facility together is commitment to innovation and development. There is a strong emphasis on being first.	4.25	1.74	0.45	0.39	0.46	0.78
d12) My facility emphasizes growth and acquiring new resources. Readiness to meet new challenges is important.	3.86	1.87	0.70	0.43	0.84	0.78
Hierarchical	4.32	1.14				0.65
d2) My facility is a very formalized and structured place. Bureaucratic procedures generally govern what people do.	4.25	1.65	0.15	0.52	0.05	0.22
d5) Managers in my facility are rule-enforcers. They expect employees to follow established rules, policies, and procedures.	4.78	1.64	0.47	0.59	0.42	0.47
d9) The glue that holds my facility together is formal rules and policies. People feel that following rules is important.	4.45	1.53	0.64	0.33	0.66	0.58
d13) My facility emphasizes permanence and stability. Keeping things the same is important.	3.8	1.69	0.12	0.30	0.05	0.19
Team	3.9	1.56				0.82
d3) Managers in my facility are warm and caring. They seek to develop employees' full potential and act as their mentors or guides.	3.93	1.86	0.69	0.39	0.65	0.66
d7) The glue that holds my facility together is loyalty and tradition. Commitment to this facility runs high.	4.06	1.71	0.73	0.28	0.62	0.57
d11) My facility emphasizes human resources. High cohesion and morale in the organization are important.	3.71	1.88	0.80	0.38	0.77	0.72
Rational	4.74	1.37				0.78
d6) Managers in my facility are coordinators and coaches. They help employees meet the facility's goals and objectives.	4.16	1.90	0.76	0.44	0.83	0.54
d10) The glue that holds my facility together is the emphasis on tasks and goal accomplishment. A production orientation is commonly shared.	5.19	1.38	0.54	0.40	0.53	0.66
d14) My facility emphasizes competitive actions and achievement. Measurable goals are important.	4.87	1.62	0.54	0.44	0.49	0.66

Table 4. Exploratory factor analysis findings

Item	Factor 1 - Dynamism	Factor 2 - Task Orientation	Factor 3 - Bureaucracy	Communalities
3) Managers in my facility are warm and caring. They seek to develop employees' full potential and act as their mentors or guides.	0.849	-0.045	0.058	0.704
6) Managers in my facility are coordinators and coaches. They help employees meet the facility's goals and objectives.	0.847	0.046	0.054	0.779
1) My facility is a very dynamic place and leaves space for personal initiatives	0.774	-0.257	0.046	0.470
11) My facility emphasizes human resources. High cohesion and morale in the organization are important.	0.773	0.231	-0.130	0.803
7) The glue that holds my facility together is loyalty and tradition. Commitment to this facility runs high.	0.739	0.118	-0.198	0.628
12) My facility emphasizes growth and acquiring new resources. Readiness to meet new challenges is important.	0.683	0.353	-0.070	0.815
4) Managers and office managers in my facility are risk-takers. They encourage human resources to take risks and to innovate procedures to achieve the outcomes.	0.673	0.070	0.016	0.511
9) The glue that holds my facility together is formal rules and policies. People feel that following rules is important.	0.653	0.094	0.136	0.553
14) My facility emphasizes competitive actions and achievement. Measurable goals are important.	0.062	0.840	0.062	0.789
10) The glue that holds my facility together is the emphasis on tasks and goal accomplishment. A production orientation is commonly shared.	0.128	0.777	0.016	0.728
2) My facility is a very formalized and structured place. Bureaucratic procedures generally govern what people do.	-0.037	-0.004	0.891	0.782
5) Managers in my facility are rule-enforcers. They expect employees to follow established rules, policies, and procedures.	0.502	-0.157	0.690	0.747
13) My facility emphasizes permanence and stability. Keeping things the same is important.	-0.348	0.481	0.574	0.558
KMO = 0.853	Explained variance =	Explained variance =	Explained variance =	
N = 85	47.52	12.85	7.84	
Total explained variance = 68.21%				

Item thirteen ("My facility emphasizes permanence and stability. Keeping things the same is important.") cross-loads on all the three subscales with its values of -0.348 (on the first factor), 0.481 (on the second factor) and 0.574 (on the third factor). This result appears, however, similar to that of Helfrich et al. (2007) in which item thirteen is still presented as a cross-loading. Despite the intersection of the loadings, the highest loading of item thirteen is on the third factor: this outcome is consistent with the fact that factor three represents bureaucracy. In addition, the loading of item thirteen on the first factor is negative, and even this outcome is consistent. In fact, if in the first factor the subscales of team culture and entrepreneurial culture converge, it is evident that an item which measures bureaucracy is negatively correlated with this factor.

5.3 Confirmatory Factor Analysis and Model Measurement Validation

Construct validity of the three factors emerged from EFA has been assessed performing a CFA. In particular, in this

study the partial least squares (PLS) approach (Chin, 1998) has been chosen using the PLS-Graph 3.0 software (Chin, Marcolin, & Newsted, 2003). The minimal demands on measurement scales and sample size considerations guided in the selection of variance-based approach over covariance-based approach such as Lisrel (Joreskog & Sorbom, 1989). In fact, Bentler and Chou (1988) recommend a minimum ratio from five to ten cases per parameter while in variance-based model sample size is reliable if it is ten times the largest number of formative indicators used to measure a single construct (Hair, Hult, Ringle, & Sarstedt, 2013). Being our sample size of 85 is a little bit poor for LISREL analysis, on the contrary it was satisfactory for PLS since the largest subscale in the proposed measurement model of this study has eight items. All items of the three factors were assumed as reflective indicators and a bootstrapping procedure with 100 resamples and 50 cases per sample has been applied allowing us to produce more accurate results. The psychometric properties of the three factors are presented in table 5.

Table 5. Psycometric properties of the three factors solution

Subscale/Construct	Composite Reliability (CR)	Average Variance Extracted (AVE)	Indicator	Factor Loadings	T-Statistics
Dynamism	0.932	0.635	3) Managers in my facility are warm and caring. They seek to develop employees' full potential and act as their mentors or guides.	0.821	122.051
			6) Managers in my facility are coordinators and coaches. They help employees meet the facility's goals and objectives.	0.878	248.010
			1) My facility is a very dynamic place and leaves space for personal initiatives	0.623	53.292
			11) My facility emphasizes human resources. High cohesion and morale in the organization are important.	0.896	308.191
			7) The glue that holds my facility together is loyalty and tradition. Commitment to this facility runs high.	0.780	96.986
			12) My facility emphasizes growth and acquiring new resources. Readiness to meet new challenges is important.	0.870	168.704
			4) Managers and office managers in my facility are risk-takers. They encourage human resources to take risks and to innovate procedures to achieve the outcomes.	0.739	86.399
			9) The glue that holds my facility together is formal rules and policies. People feel that following rules is important.	0.713	71.279
Task Orientation	0.911	0.836	14) My facility emphasizes competitive actions and achievement. Measurable goals are important.	0.915	308.588
			10) The glue that holds my facility together is the emphasis on tasks and goal accomplishment. A production orientation is commonly shared.	0.915	308.588
Bureacracy	0.811	0.592	2) My facility is a very formalized and structured place. Bureaucratic procedures generally govern what people do.	0.862	203.646
			5) Managers in my facility are rule-enforcers. They expect employees to follow established rules, policies, and procedures.	0.773	70.428
			13) My facility emphasizes permanence and stability. Keeping things the same is important.	0.667	53.032

Convergent validity determines whether items pertaining to a construct are more related to each other than with items of other constructs and it is considered acceptable when all items loadings are greater than 0.50. In particular, in this study, convergent validity has been assessed by employing factor loadings, composite reliability (CR) and average variance extracted (AVE). Factor loadings were significant and greater than 0.60 for each item. Similarly, as illustrated in Table 5, each CR and AVE value is above the minimum criteria of 0.7 and 0.5, respectively (Garbarino and Johnson 1999; Hair, Black, Babin, & Anderson, 2010), indicating that convergent validity is not an issue and it is well satisfied. In fact, in the present study, CR values ranged from 0.811 to 0.911 while AVE ranged from 0.592 to 0.836.

Discriminant validity detects whether two constructs are really distinct constructs. This study assesses discriminant validity by comparing the square root of the AVE of each construct with its correlation coefficients with other constructs. In particular, this study demonstrated in Table 6 that the AVE from each construct is greater than the variance shared between that construct and the other constructs; thus, following the criteria advanced by Fornell and Larcker (1981), it reveals satisfactory discriminant validity. Overall, CFA results collectively indicate that three constructs measurement properties are more than satisfactory.

Table 6. Factors' correlation and square roots of the AVE

	Dynamism	Task orientation	Bureacracy
Dynamism	0.797		
Task Orientation	0.605	0.914	
Bureacracy	0.298	0.354	0.769

Bolded diagonal values are square roots of AVE

6. Discussion, Implications and Conclusions

6.1 Three types of Organizational Culture Characterize Context Highly Fragmented

The goal of the paper was to verify how CVF works in a context characterized by frequent legislative reforms that change organizational rules in order to understand if a vague reforming action affects the organizational culture. So the paper has two types of implications: the theoretical ones refer to the validity of the CVF framework: the practical ones are connected to the usability of the CVF in context characterized frequent changes.

The analysis has evidenced problems with the convergent/divergent properties of the CVF subscales when applied to staff of an Italian national public agency. The conventional 4-factor model does not fit the data, as revealed by item analysis. However, this is merely an exploratory analysis, as it affected only the staff of four local offices of a national public agency. Therefore, to make the results generalizable, it would be necessary to extend the analysis to employees of other public agencies. During model re-specification, item one was dropped because of its poor reliability and a 13-item, three-factor exploratory model devised. This modified three-factor model may provide an alternative to the CVF subscales for those public organizations affected by processes of change that have not yet acquired a definitive organizational structure.

The factor labelled "dynamism" consists of eight items that highlight the role of coaching for managers and human resource development. These two elements characterize the organizational model *Human relations* linked to a clan culture, aimed to build moral cohesion and commitment and to develop human resources. This factor includes elements that characterize the Open System model, such as item one ("The office where I work is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks"), item twelve ("The office where I work emphasizes growth and acquiring new resources. Readiness to meet new challenges is important.") or item four ("Managers in my facility are risk takers. They encourage employees to take risks and to be innovative"), linked to a hierarchical or entrepreneurial culture.

Compared to the original theoretical configuration a clear distinction between the "Human relations" and "Open system organization" models does not seem to emerge. Consequently, entrepreneurial and team culture appear to be mixed up in employees' minds. The functional characteristics of Italian Public Administration are the results of decades characterized by a strong emphasis on procedures. However, as noted in paragraph 2.1, for two decades now, a reform process in the P.A., has been started addressed to introduce a team culture, an entrepreneurial culture and the empowerment of human resources. The blending of the two factors (entrepreneurial and team) into one factor denominated "dynamism" may have been generated by the intense legislative production aimed at reforming the Italian Public Administration, promoting a process of change towards more innovative organizational models and leadership styles. The convergence of items connected with different organizational models in the same factor could be a characteristic aspect of organizations interested in the processes of change, in which, however, these modifications have not yet become established and have not

yet been accepted by employees. The Rational factor is composed of two items that express clearly an organizational model in which the aim is productivity and efficiency and the means to obtain them is the programming and the management of objectives. The identification of this factor is very consistent with the Italian situation, in which one of the reforms of Public Administration (Legislative Decree no. 150/2009), outlines a management model based on the Performance Cycle in which the programming, the objectives and the examination of results are crucial moments of the whole process.

The factor "bureaucracy" is composed of three items that underline the importance of rules and procedures, emblems of an organization that pays attention to internal processes to maximize stability and control. Also this finding was not unexpected in an Italian Public Administration. In Italy, for years the bureaucratic model has been the organizational model of all Public Administrations and even today many management aspects are organized according to this model. The feature of administrative responsibility is a factor driving public organizations towards very formalized organizational models to minimize this kind of responsibility, both for those who are designated to take decisions and for those in positions of control. In this sense, the definition of procedures and rules could not be negative to the extent that the rules and procedures are established to maximize the efficiency and effectiveness of processes, keeping in mind always the results to be achieved and the recipients of the activities.

6.2 New Horizons for CFV Framework, Policy Makers and Executives in Context Highly Fragmented

Regarding to practical implications, the analysis confirmed that dimensions of CVF are not mutually exclusive; every organization expresses each dimension to some degree, yet most organizations emphasize some of these dimensions more than others (Quinn, & Cameron, 1983; Zammuto, & Krakower, 1991). In context characterized by frequent normative changes CVF highlights two opposing forces: innovation and change generated by reforms converging into dynamism; tradition and resistance to change converging into bureaucracy. Task Orientation factor it seems expresses that efficiency, performance, task focus, and goal clarity are accepted values.

The CVF is useful to assess the results generated by the reforming action. Managers have a crucial role in determining the future of this organization. It is possible that in times of change, managers perceive a degree of uncertainty about the future and they do not make a clear choice between traditions (stability) and change (innovation). So, if they stress routinization, centralization, control, stability, continuity, and order, probably the hierarchical model will prevail. If they stress trust, teamwork, participation, empowerment, probably entrepreneurial and team culture will issue. For example in this study it is possible to depict the change process in Italian Public Administration as crossing a river where people can go straight on the other side or frightened in midstream and go back and top managers play a key role with respect to the result. These findings are in line with Naqshbandi, Kaur and Ma (2015) on the role of top managers in promoting organizational culture. Authors (2015, p. 2138) suggest "The top managers tasked with promoting open innovation in the workplace should discourage all the aspects of hierarchy culture and show strong commitment towards the promotion of highly integrative culture in their organizations".

The Competing Values Framework is a model widely used to assess organizational culture. It is a well-validated model with reliable, generalizable subscale solutions. Most of the studies which use this model were conducted on managers and it is assumed that the findings can also be extended to employees.

However, our findings suggest that not all of the assumptions made in previous works are accurate. First of all, it has been confirmed, as asserted by Schein (1999), that organizational culture is a difficult construct to measure and that in organizations – and probably in individuals – different types of culture coexist at the same time. In other word, this study, in line with other scholars, confirms the difficulty of assessing organizational culture due to its multiple dimensions (Schein, 1992). In fact, Hogan and Coote (2014) found that different layers of organizational culture, particularly norms, artefacts, and innovative behaviours, partially mediate the effects of values that support innovation on firm performance. Similarly, Naqshbandi, and Kamel (2017) found that the ability of recognize and use knowledge available outside firm's boundaries mediates the relationship between organizational culture types and open innovation types. The consequence of this view is that there isn't a tool to measure organizational culture "*erga omnes*", but that the tool for measuring organizational culture should be checked in every new context where it is used. This finding is in line with Helfrich et al. (2007) study, where the difficulty of applying an instrument with four factors in favour of an instrument with only two factors is underlined.

Finally, the findings highlight the diverse characteristics of the organization in which the analysis is conducted. In an organization with a stable organizational structure it is more likely to encounter a clearer distinction

between the different types of cultures, while in organizations affected by organizational changes, the diverse kinds of cultures may overlap and mingle, merely because of ongoing changes.

The limited nature of the sample does not allow generalizations. Further analysis should be conducted expanding both the size of the sample and the type of organizations. The exploratory nature of the research indicates interesting research areas of the CVF to ascertain whether organizational change is a particular phase of the life cycle of an organization in which the types of organizational culture tend to initially overlap to later emerge in a more distinct way when the transformation has been consolidated. This paper collects a further study on the CVF framework assessing the effects of frequent changes in the organizational rules in a public context. Additional research is now needed, in particular by expanding the survey sample to other areas of the Public Administration. Future research areas will include cross-cultural audits to compare what happens to the model in areas characterized by constant reform efforts but in different geographic areas. Furthermore, mediating effects of different layers of organizational culture need to be tested in different geographical areas.

References

- Barzelay, M., & Gallego, R. (2010). The Comparative Historical Analysis of Public Management Policy Cycles in France, Italy, and Spain: Symposium Introduction. *Governance*, 23, 209-223. <https://doi.org/10.1111/j.1468-0491.2010.01476.x>
- Bentler, P. M., & Chou, C. P. (1988). Practical Issues in Structural Modeling. In Long, J. S. (Eds), *Common Problems/Proper Solutions: Avoiding Error in Quantitative Research*. Newbury Park: Sage Publications, 161-192.
- Brown, A. (1998). *Organisational Culture*. London: Pitman Publishing.
- Cameron, K., & Freeman, S. J. (1991). Cultural congruence, strength, and type: relationships to effectiveness. *Research in Organizational Change and Development*, 5, 23-58.
- Cameron, K., & Quinn, R. E. (2006). *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*. Beijing: China Renmin University Press.
- Chin, W. W. (1998). Issues and opinion on structural equation modeling. *MIS Quarterly*, 22(1), vii-xvi. <http://www.jstor.org/stable/249674>
- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A Partial Least Squares Latent Variable Modeling Approach for Measuring Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic-Mail Emotion/Adoption Study. *Information Systems Research*, 14(2), 189-217. <https://doi.org/10.1287/isre.14.2.189.16018>
- Denison, D., & Spreitzer, G. M. (1991). Organizational culture and organizational development: A competing values approach. *Research in organizational change and development*, 5(1), 1-21.
- Di Padova, L. N., & Faerman, S. R. (1993). Using the competing values framework to facilitate managerial understanding across levels of organizational hierarchy. *Human Resource Management*, 32, 143-174. <https://doi.org/10.1002/hrm.3930320108>
- Feola, R., Vesci, M., Botti, A., & Parente, R. (2017), The Determinants of Entrepreneurial Intention of Young Researchers: Combining the Theory of Planned Behavior with the Triple Helix Model. *Journal of Small Business Management*.
- Fornell, C., & Larcker D. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.2307/3151312>
- Garbarino, E., & Johnson M. S. (1999). The Differential Roles of Satisfaction, Trust, and Commitment in Customer Relationships. *Journal of Marketing*, 63 (April), 70-87. <https://doi.org/10.2307/1251946>
- Gershon, R. P., Stone, W., Baken, S., & Larson, E. (2004). Measurement of Organizational Culture & Climate in Healthcare. *Journal of Nursing Administration*, 34(1), 33-40. <https://doi.org/10.1097/00005110-200401000-00008>
- Gregory, B. T., Harris, S. G., Armenakis, A. A., & Shook, C. L. (2009). Organizational culture and effectiveness: A study of values, attitudes, and organizational outcomes. *Journal of Business Research*, 62, 673-679. <https://doi.org/10.1016/j.jbusres.2008.05.021>
- Hair, J. F., Black W. C., Babin B. J., & Anderson R. E. (2010). *Multivariate Data Analysis*, 7th ed. Upper Saddle River, NJ: Prentice Hall.

- Hair, J. F., Black, W.C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*. Upper Saddle River: Prentice Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2013). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SE)*. Thousand Oaks: Sage Publications, Inc.
- Helfrich, C. D., Li, Y., Mohr, D. C., Meterko, M., & Sales, A. E. (2007). Assessing an organizational culture instrument based on the Competing Values Framework: Exploratory & confirmatory factor analyses. *Implementation Science*, 2(13), 1-14. <https://doi.org/10.1186/1748-5908-2-13>
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work Values*. Beverly Hills: Sage.
- Hofstede, G. (1997). *Culture & Organisations: Software of the Mind*. Maidenhead: McGraw-Hill.
- Hogan, S. J., & Coote, L. V. (2014). Organizational culture, innovation, and performance: A test of Schein's model. *Journal of Business Research*, 67, 1609-1621. <https://doi.org/10.1016/j.jbusres.2013.09.007>
- Homburg, C., & Pflesser, C. (2000). A multiple-layer model of market-oriented organizational culture: Measurement issues and performance outcomes. *Journal of Marketing Research*, 37(4), 449-462. <https://doi.org/10.1509/jmkr.37.4.449.18786>
- Jennings, E. T. (2012). Organizational Culture and Effects of Performance Measurement. *Public Administration Review*, 72, S93-S94. <https://doi.org/10.1111/j.1540-6210.2012.02636.x>
- Joreskog, K. G., & Sorbom, D. (1989). *LISREL 7: User's Reference Guide*. Mooresville, IN: Scientific Software.
- Kalliath, T. J., Bluedorn, A. C., & Gillespie, D. F. (1999). A confirmatory factor analysis of the competing values instrument. *Educational & Psychological Measurement*, 59(1), 143-158. <https://doi.org/10.1177/0013164499591010>
- Mele, V., & Ongaro E. (2014). Public Sector Reform in a Context of Political Instability: Italy 1992-2007. *International Public Management Journal*, 17(1), 111-142. <https://doi.org/10.1080/10967494.2013.849168>
- Naqshbandi, M. M., & Kamel Y. (2017). Intervening role of realized absorptive capacity in organizational culture-open innovation relationship: Evidence from an emerging market. *Journal of General Management*, 42(3), 5-20. <https://doi.org/10.1177/0306307016687984>
- Naqshbandi, M. M., Kaur, S., & Ma, P. (2015). What organizational culture types enable and retard open innovation? *Quality & Quantity*, 49(5), 2123-2144. <https://doi.org/10.1007/s11135-014-0097-5>
- O'Reilly III, C. A., Chatman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal*, 34(3), 487-516. <https://doi.org/10.2307/256404>
- Ongaro, E. (2009). *Public Management Reform and Modernization. Trajectories of Administrative Change in Italy, France, Greece, Portugal, Spain*. Cheltenham, UK: Edward Elgar. <https://doi.org/10.4337/9781849802284>
- Ostroff, C., Kinicki, A., & Tamkins, M. (2003). *Organizational culture & climate*. New York: John Wiley & Sons. <https://doi.org/10.1002/0471264385.wei1222>
- Pettigrew, A. M. (1979). On studying organizational cultures. *Administrative Science Quarterly*, 24, 570-581. <https://doi.org/10.2307/2392363>
- Pollitt, C., & Bouckaert, G. (2004). *Public management reform: a comparative analysis*. Oxford, UK: Oxford University Press.
- Quinn, R. E. (1988). *Beyond rational management*. San Francisco: Jossey-Bass.
- Quinn, R. E., & Cameron, K. (1983). Organizational life cycles & shifting criteria of effectiveness: Some preliminary evidence. *Management science*, 29(1), 33-51. <https://doi.org/10.1287/mnsc.29.1.33>
- Quinn, R. E., & Kimberly, J. R. (1984). Paradox, planning, & perseverance: Guidelines for managerial practice. *Managing organizational transitions*, 295, 313.
- Quinn, R. E., & McGrath, M. R. (1985). *The transformation of organizational cultures: A competing values perspective*. Beverly Hills: Sage.
- Quinn, R. E., & Rohrbaugh, J. (1981). A Competing Values Approach to Organizational effectiveness. *Public Productivity Review*, 5(2), 122-140. <https://doi.org/10.2307/3380029>
- Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: toward a competing values

- approach to organizational analysis. *Management Science*, 29(3), 363-377.
<https://doi.org/10.1287/mnsc.29.3.363>
- Quinn, R. E., & Spreitzer, G. M. (1991). The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on quality of life. *Research in organizational change & development*, 5, 115-142.
- Quinn, R. E., Faerman, S. R., Thompson, M. P., & McGrath, M. (1990). *Becoming a master Manager*. New York: John Wiley & Sons.
- Schein, E. H. (1985a). *Organizational culture & leadership: A Dynamic view*. San Francisco: Jossey-Bass.
- Schein, E. H. (1985b). Defining organizational culture. *Classics of organization theory*, 3, 490-502.
- Schein, E. H. (1992). *Organizational culture and leadership*. San Francisco: Jossey-Bass Inc.
- Schein, E. H. (1999). *The Corporate Culture Survival Guide: Sense And Nonsense About Culture Change*. New York: John Wiley & Sons.
- Scott, T., Mannion, R., Marshall, M. N., & Davies H. T. O. (2003). Does organisational culture influence health care performance? A review on the evidence. *Journal of Health Services Research & Policy*, 8(2), 105-117.
<https://doi.org/10.1258/135581903321466085>
- Siehl, C., & Martin, J. (1990). Organizational culture: a key to financial performance? In Schneider, B. (eds.). *Organizational climate and culture*. San Francisco: Jossey-Bass, 241-281.
- Taylor, J. (2014). Organizational culture and the paradox of performance management. *Public Performance & Management Review*, 38(1), 7-22. <https://doi.org/10.2753/PMR1530-9576380101>
- Yin, R. K. (2009) *Case Study Research: Design & Methods* (4th ed.). London: Sage.
- Yu, T., & Wu, N. (2009). A Review of Study on the Competing Values Framework. *International Journal of Business & Management*, 4(7), 37-42. <https://doi.org/10.5539/ijbm.v4n7p37>
- Zammuto, R. F., & Krakower, J. Y. (1991). Quantitative & qualitative studies of organizational culture. *Research in Organizational Change & Development*, 5, 83-114.
- Zheng, W., Yang, B., & McLean, G. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, 63, 763-771. <https://doi.org/10.1016/j.jbusres.2009.06.005>

Notes

Note 1. The agency did not authorize us to disclose its identity.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).