"Identifying dominant organizational culture types in public Egyptian universities and their relationships to a set of developmental indicators"

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Identifying dominant organizational culture types in public Egyptian universities and their relationships to a set of developmental indicators

Abstract

The aim of the current study is to identify the dominant organizational culture type/types, figure out if there is a relationship between organizational culture and developmental indicators, and investigate factors that might affect adopting a specific organizational culture type, such as size of organization and specialty. A sample of 600 academic staff members (assistant professors, associate professors, full professors) was randomly selected from 53 academic departments which represented 19 colleges in Mansoura University. The unit of the analysis was the academic department. A sixteen-item questionnaire has been developed by the current researchers, based on the competing values framework (Quinn, 1983), and validated using CFA. Reliability of the four CVF scales was estimated using the formula suggested by Reuterberg and Gustafsson (1992). Results indicate that both clan and market organizational cultures are the dominant cultures that direct the shared values, assumptions and interpretations in most departments, whereas hierarchy culture is the least common one. On the other hand, current study found that clan, adhocracy, and market types were associated with most developmental indicators which were not the case with the hierarchy culture type. In addition, departments which adopt clan or market culture types were more likely to describe their environment as facilitator or at least neutral with regard to development. Department size and specialty were not found to be predictive factors of specific organizational culture type. Results of the current study may give the persons who are in charge insights to develop the higher educational system in Egypt.

Keywords: organizational culture, Competing Value Framework (CFV), organizational development.
JEL Classification: M14, M19.

Introduction

Organizational development could be seen as a planned process of change in an organization's culture, based on operationalizing behavioral science, research, and theory. Accordingly, the organizational culture has an important participation in organizational development efforts to achieve required change (Akdere and Schmidt, 2007).

When people exist in an organization they carry with them their own values and beliefs. It is observed that there are different perspectives and problems related to the conceptualization of organizational culture in the literature (Luthans, 1992). Culture is a set of values, guiding beliefs, understanding, and ways of thinking that is shared by members of organization and is taught to new members as correct. It represents the unwritten feelings part of the organization (Daft, 1998, p. 368). In addition, it was shown as the basic values, ideologies and assumptions which guide and fashion individual and business behavior. These values are evident in more tangible factors such as stories, ritual, language and jargon, office decoration, layout and dress code among individuals (Rosenfled & Wilson, 1999, p. 270). The culture of an organization represents a complex pattern of beliefs and expectations shared by its members. More specifically, organizational culture is defined as shared philosophies, ideologies, values, beliefs, assumptions, expectations, attitudes, and norms (Hellriegel, Slocum, and Woodman, 1989, p. 302). Obenchain (2002) views organizational culture as a set of shared assumptions known by an organization as it handles its problems of external adaptation and internal integration, it involves shared, taken-for-granted assumptions carried by members of an organization.

Jaskyte (2002) adopts the definition that refers to the organizational culture as a group of values that assist organization`s members to understand organizational functioning, so it guides their thinking and behavior. Akdere and Schmidt (2007) adopt the organizational culture definition which is a pattern of basic assumptions which have been established, discovered, or developed by a given group, in learning to handle an organization`s problems of external adaptation and internal integration, which have worked well enough to be considered valid, so they should be taught to new employees as right way to perceive, think, and feel regarding those problems. Also, it could be defined as those things that a group learns over time as they share a common history of solving problems in order to survive in their external environment and to become more uniform internally (Dunnett, 2007, p. 38).

A common misconception is that organization has a uniform culture. Members of an organization would share common values, beliefs, traditions and philosophy; however, realistically they may not behave accordingly in the same degree. Therefore, there can be a dominant culture as well as subcultures throughout a typical organization. A dominant culture is a set of core values shared by a majority of the organization`s members (Luthans, 1992). In this context, Dunnett (2007) argues that "since culture is shared by the group, people within an organization should perceive performance, control and behavioral norms similarly. However, it is never shared completely by different members of the group, so slight variations will occur in the interpretation of the same behaviors or events. Human nature dictates that different people will view the same actions from their various perspectives and this may translate into some individual modification of the culture norms." (pp. 39-40).

Organizational culture type could be seen as a pattern of shared values, assumptions, and interpretations which are embedded at the root of organizational system and structure and define an organization`s culture from different four types, which are: Adhocracy, Clan, Hierarchy, and Market (Obenchain, 2002).

There are many attempts to categorize the different types of organizational culture; the kind of transactions linked to information exchange was used as a basis in the extent of categorizing organizational culture into four general culture groups (Dunnett, 2007).

The four quadrants of the Competing Values Framework (CVF) show two dimensions, which are important to organization science. One of the issues encountering theorists includes external adaptation that is shown on the horizontal axis as the value for internal focus versus external focus. On the other hand, the vertical axis of the CVF refers to the value dimension for issues in the extent of internal integration, which is considered, also, as a problem that faces organization theorists and reflects values for flexibility versus control. The CVF model is helpful in identifying the organizational culture content and culture type in an organization (Obenchain, 2002, p. 86).

The CVF model results in four quadrants which are precisely compatible with the basic organizational forms that have been developed in organizational science: Open System Model, Human Relations Model, Internal Process Model, and Rational Goal Model (Obenchain, 2002).
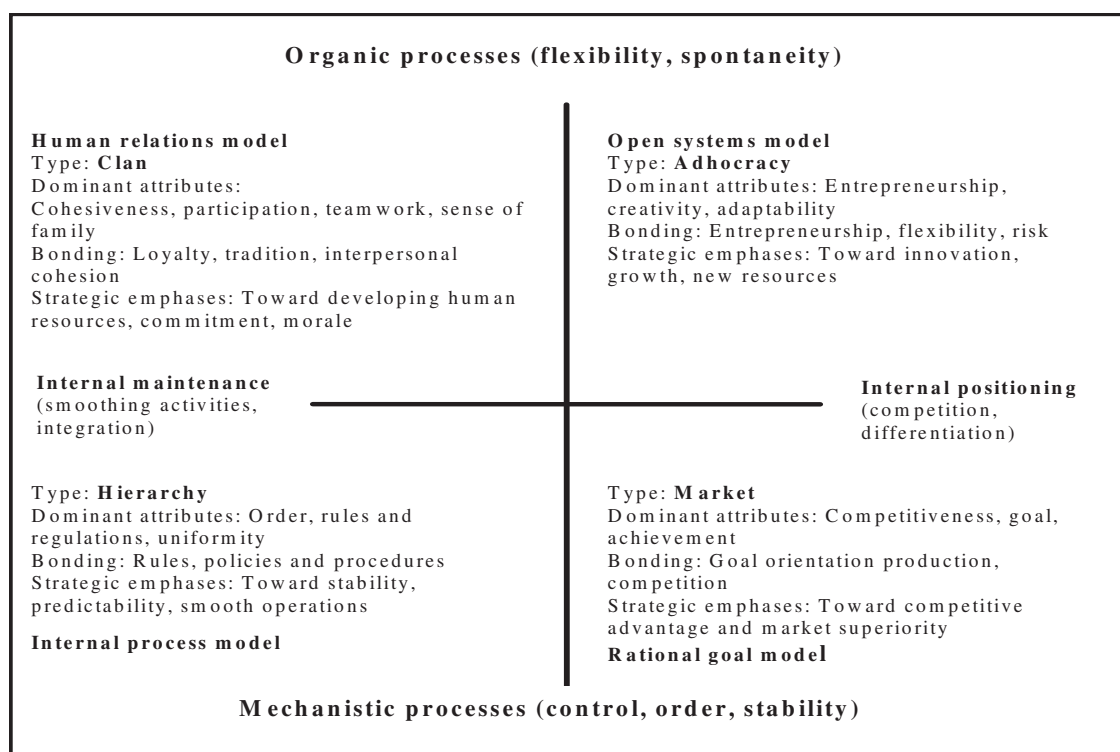

Fig. 1. A model of organizational culture types

As for CVF`s four quadrants, the flexibility/external emphasis quadrant is named the Open Systems Model (Adhocracy culture), and it is often innovative, aggressive, adaptable, and

entrepreneurial culture type (Obenchain, 2002). It was referred that this culture type is found in organizations that adopt ideological culture which measures performance using the objectives of

growth and resource development (Dunnett, 2007). The authority in this situation is based on charisma with decisions often intuitive and employees responding become aware of their commitment to the corporate value system (Dunnett, 2007, p. 39).

The quadrant that is labeled the Human - Relations Model (Clan culture) reflects the flexibility/internal emphasis, and is often described as family, trusting, loyal, empowered and collegial (Obenchain, 2002). In addition, it was mentioned that the consensual culture exists in organizations which adopt clan type of organizational culture, which puts group maintenance as its top priority and measures performance on its contribution to harmony and moral of the organization. As for the authority, it is split among the group members, with participative decision-making, usually within consensus, and members consolidate resulting from their contributions in the process. Members are compensated for loyalty to the organization (Dunnett, 2007).

The quadrant that is labeled Rational Goal Model (Market culture) emphasizes control/external focus, and it is often described as driven, goal-oriented, achieving focused (Obenchain, 2002). Productivity and efficiency are seen as its main determinants of performance, with leader who directs the culture of the group based on the authority that he has, and that results from his personal competency (Dunnett, 2007).

Eventually, the quadrant that is labeled the Internal Process Model (Hierarchy culture) reflects the control/internal emphasis, and it is often bureaucratic, rule-bound, by-the-book and top-down (Obenchain, 2002). A Hierarchy culture type is usually found in an organization that has a hierarchy style (Dunnett, 2007). In the context of authority, the rules determine authority and power goes to members who own technical expertise (Dunnett, 2007). With regard to decision-making, it is based on factual analysis, and employees are evaluated according to formal standards of performance (Dunnett, 2007).

The four different types have competing orientations or values; Clan type stands in contrast to Market type, while Adhocracy stands in contrast to Hierarchy (Obenchain, 2002). It was referred that organizations want to be adaptable and flexible, but they also want to be stable and controlled. They want growth, resource acquisition, and external support, but they also want tight information management and formal communication. They want an emphasis on the value of human resources, but they also want an emphasis on planning and goal

setting (Quinn, Hildebrandt, Rogers, Thompson, 1991, p. 217).

Obenchain (2002) was interested in studying the relationships between the organizational culture type, size and organizational type and the implementation of innovation in higher education institutions. He found that the majority of these institutions adopt a dominant culture type of Clan; he also found a significant difference between the mean scores on total innovation for each of the dominant culture types (Obenchain, 2002).

Jaskyte (2002) examined the relationship between organizational culture and organizational innovativeness, and she found that the degree of sharing the organizational values would be important as predictors of organizational innovativeness. In addition, it was found that the Adhocracy type was affiliated with higher organizational innovation than other types of CVF model (Obenchain, 2002).

Results of Jaskyte (2002) study call for further exploration of the organizational culture. The wide variation in the degree to which values were shared within organizations indicated that organizational culture cannot be dichotomized as only strong or weak, but should rather be treated as more variable phenomenon. When examining the effect of organizational culture on innovation scholars should consider not only the cultural consensus (or culture strength) and its contents, but also organizational structure (p. 88). Chang and Lee (2007) found that knowledge acquisition and knowledge diffusion are affected significantly by supportive and innovative culture.

Quinn et al. (1991) have used CVF framework to suggest a model that illustrates the dynamic interplay between characteristics of the general types of presentational communication. This model has been used as an evaluative tool in analyzing and training of managers.

Buenger, Daft, Conlon & Austin (1996) in their study of application of CVF model in different Air force organizations found that certain patterns of value appear to exist within particular environment and technological context. For example, when managers decide to give priority to programs designed to strengthen the human relations, value efficiency and short-term profitability may drop off. These findings indicate tradeoffs among values.

Marcoulides and Heck (1993) have proposed a structural model relating organizational culture with organizational performance. The model includes organizational culture`s variables such as, individual

attitudes and goals, task organization, organizational climate, organizational values, and organizational structure. These values are hypothesized to affect the organizational performance. Results which were derived from 392 respondents indicate the fit of the proposed model to data. Using the visible aspects of the organizational culture across and within organizations provides useful information for guiding the directions of organizations. In addition, it can be used to explain why some organizations are not performing at desired level of productivity.

In an application of competing values framework in leadership Yang and Shao (1996) have found that effective self-managed teams play and balance eight competing roles: innovator, broker, producer, director, coordinator, monitor, facilitator and mentor. Moreover, a team`s life cycle has an impact on the priority of the competing roles. These findings indicate that managers in the organizations should not only be concerned about the development and balance of the eight roles, but should also change role emphasis during the different stages in the team development.

Based on the competing values framework, Panayotopoulou et al. (2003) developed a new human resource management (HRM) model to clarify what type of HRM is linked to various aspects of firm performance. Finding implied from a sample of 104 organizations showed that when HRM is consistent with the competitive strategy it has a significant effect on financial performance. In addition, they found that market performance is positively influenced by HRM flexibility and negatively by HRM control.

In an Arab culture, Al-Khalifa and Aspinwall (2001) have investigated the degree of compatibility of the culture that exists in the industries and required for implementing T.Q.M. in Qatar. They found that many organizations were not characterized by just one organizational culture type, but a mix of two, which did not match the culture profile characteristics that support T.Q.M.

The aim of the current study is to identify the dominant organizational culture type/types, figure out if there is a relationship between organizational culture and developmental indicators, and investigate factors that might affect adopting a specific organizational culture type, such as size of organization and specialty.

Research questions

Q1: Which organizational culture type is dominant in public Egyptian universities?
Q2: What is the relationship between a dominant culture type and a set of developmental indicators?

Q3: Is there any difference among departmental development categories (facilitator, neutral, and barrier) with regard to each organizational culture type?
Q4: What are the factors that affect adoption of organizational culture type?

Research hypotheses

H1: There are no significant differences between higher education institutions, regarding the organizational culture types they adopted.
H2: There is a significant relationship between dominant organizational culture type and selected developmental indicators.
H3: There are differences among departmental development categories (facilitator, neutral, and barrier) with regard to each organizational culture type.
H4: There is no significant relationship between organizational culture type and size of the organization and organization's specialty (theoretical and practical).

This study is done within the framework of organizational culture type which is rarely investigated in Arabian literature, in general, and especially in Egypt. Also, this paper focuses on investigating the potential relationship between organizational culture type and a set of developmental indicators, which is not commonly researched. In addition, our unit of observation is the scientific department, which is more appropriate unit of analysis for such type of research.

1. Method

1.1. Sample. The unit of observation is the academic department. The sample of the academic departments has been selected randomly from the Mansoura University's database bought from the Technical Center for Communications and Information. This database contains scientific departments, staff members in Mansoura University, with their personal records, including contact information.

A sample of 600 academic staff members (assistant professors, associate professors, full professors) was randomly selected from 53 academic departments which represented 19 colleges in Mansoura University.

Academic staff members were contacted and asked to respond to a questionnaire developed by the current researchers[1], though only 223 (37.17 %)

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[1] Both researchers participated in achieving the current research equally.

staff members have participated. Therefore, our final sample consists of 223 staff members nested within 53 departments.

1.2. Questionnaire development. The original questionnaire was prepared in Arabic based on the questionnaire developed by Obendhain and Johnson (2004). The researchers developed their own questionnaire to identify the organizational culture type that exists throughout the public Egyptian universities. In addition, the questionnaire includes a set of developmental performance indicators related to different departmental activities. Therefore, it consists of two parts: organizational culture type and a set of developmental performance indicators.

Sixteen items, based on the competing values framework (Quinn, 1983) were formed in the questionnaire to assess organizational culture type. These items were adopted from Obendhain and Johnson (2004) (see Appendix).

Each respondent was asked to indicate on a 5-point scale the degree to which each statement describes his department. Responses could be ranged from 0 to 5. Each organizational culture type was assessed by 4 statements. Therefore, four numerical scores could be calculated for organizational culture type per individual. The highest numerical score represents the dominant organizational type.

The second part of the questionnaire, which assesses the developmental indicators, was operationalized by 17 questions. In addition, an overall question was asked to each respondent to describe his department with regard to development in general.

1.3. Data analysis. All data were analyzed using SPSS 15.0 (SPSS Inc., 2007) and AMOS 7 (Arbuckle, 2006). Analysis was done on both individual (n = 297) and department (n = 53) levels. Department level data were obtained by aggregating the individual level data using department as a base of aggregation. Confirmatory factor analysis (CFA) (Bollen, 1989) was used to validate the factorial structure of the questionnaire. Correlations, T-tests and ANOVAs were used to test the study hypotheses. Model-data fit was assessed using absolute (Chi-square and Chi-square/df), incremental {Incremental Fit Indexes (IFI), Non-Normed Fit Index (NNFI) and Comparative Fit Index (CFI)} and Residual Fit Indexes (Root Mean Square Error of Approximation (RMSEA). Size of department was operationalized as small (less than or equal to 20 academic staff members) or big (more than 20 academic staff members).

1.4. Questionnaire validity analysis. The initial CFA model consists of the four organizational

cultures specified as factors in which the questionnaire's 16 items are loaded. Four items are loaded on each factor compromising a four-factor CFA model (see Appendix A). Model-data fit indexes indicate a poor fit; Chi-square value was significant (227.89, df=80), Chi-square/df = 2.84 (2 or less indicating acceptable fit), IFI = 0.88 (0.95 or more indicating acceptable fit), NNFI = 0.85 (0.95 or more indicating acceptable fit), CFI = 0.88 (0.95 or more indicating acceptable fit) and RMSEA = 0.09 (0.07 or less indicating acceptable fit). To achieve better model-data fit, and after consulting modification indexes and residual analysis, two items were deleted, namely items 3&7 which were originally loaded on hierarchy culture type (see Appendix B). The modified model showed very good fit to data with Chi-square/df = 2, IFI, NNFI and CFI = 0.98, 0.96 and 0.98 respectively, and RMSEA = 0.06. In addition, item-factor loadings were high and significant (see Appendix C), ranging from 0.59 to 0.91. These CFA results indicate the validation of the four-factor model to data, which is consistent with the theoretical framework of the study (CVF, Obendhain and Johnson, 2004).

1.5. Questionnaire reliability analysis. Reliability of the four CVF scales was estimated using the formula suggested by Reuterberg and Gustafsson (1992) because the most general and commonly used measure of internal consistency, Cronbach's alpha yields an unbiased estimate of reliability only if the loadings on the common factor are equal. Since our loadings on each common factor are not equal (see Appendix B), it is not recommended to use Cronbach's alpha as a measure of internal consistency. All of the questionnaire subscales show acceptable level of Internal consistency (see Appendix D).

2. Results

Checking percentage of dominant organizational culture types among departments indicates that most departments (32.1%) adopt the clan culture as a dominant organizational culture. Market culture occupied the second dominant organizational culture among departments (20.8%). One-fifth (20.8%) of the sample departments has no dominant organizational culture. Adhocracy and hierarchy culture types are the least common cultures among departments (11.3% and 15.1%, respectively). These results did not support the first hypothesis of the study.

Table 1 shows correlation coefficients between each developmental indicator and organizational culture types. Most indicators show significant correlation with clan culture type, the only exception is "the

existence of scientific seminars in which state-of-the-art topics in the specialty are discussed" indicator. The highest correlations are for "facilitating researchers` skills development" and "supporting the faculty towards accreditation" indicators (r = 0.64 and 0.71, respectively). With regard to adhocracy culture type, from the 12 selected developmental indicators, nine indicators are significant. The only non-significant indicators are "knowledge of department objectives", "existence of departmental research plan" and "emphasizing both instruction and research" indicators. On the contrary, hierarchical culture type does not show any significant correlations with developmental indicators except for "freedom of choosing the appropriate evaluation approach of students` learning"

indicator (r = 0.28). Eventually, market culture type is associated with most developmental indicators except for "knowledge of department objectives" and "existence of departmental research plan" indicators. A high correlation is obtained between the market type and "facilitating researchers` skills development" indicator (r = 0.77). Regardless of the hierarchy culture type, seven indicators show significant correlations with all culture types; "evaluation of academic staff performance, updating departmental regulations periodically, encouraging funded research acquisition, facilitating researchers` skills development, supporting the faculty towards accreditation, participating in the development of the faculty regulations and overall facilitating of development" indicators.

Table 1. Correlation coefficients among developmental indicators and the four organizational culture types among departments (n = 53)

	Developmental indicator	Clan	Adhocracy	Hierarchy	Market
1	Knowledge of department objectives	0.37**	0.16	-0.17	0.14
2	Existence of departmental research plan	0.30*	0.20	0.22	0.18
3	Existence of scientific Seminars in which state-of-the-art topics in the specialty are discussed	0.19	0.34*	-0.02	0.33
4	Evaluation of academic staff performance	0.46**	0.40**	-0.07	0.39**
5	Emphasizing both instruction and research	0.33*	0.15	0.01	0.30*
6	Freedom of choosing the appropriate evaluation approach of students` learning	0.26	0.39**	0.28*	0.55**
7	Updating departmental regulations periodically	0.41**	0.41**	0.13	0.42**
8	Encouraging funded research acquisition	0.64**	0.55**	0.17	0.51**
9	Facilitating researchers` skills development	0.64**	0.67**	0.16	0.77**
10	Supporting the faculty towards accreditation	0.70**	0.57**	0.12	0.54**
11	Participating in the development of the faculty regulations	0.47**	0.44**	0.01	0.44**
12	Overall facilitating of development	0.47**	0.41**	-0.02	0.48**

Notes: * Significant at 0.05 level, ** Significant at 0.01 level.

T-tests results showed that there is a significant difference between members who assessed their departments as facilitator or neutral and those who assessed them as barrier with regard to clan (p= .02) and market (p=.01) culture types, however, no significant differences have been found with regard to both adhocracy (.40) and hierarchy (.82) culture types.

Results regarding the effect of department size, specialty and interaction between them for the organizational culture types indicate no significant effects on department size, department specialty, and interaction between them for all organizational culture types.

Discussion and conclusions

The aim of the current study was to explore the dominant organizational culture type in the public higher education institutions in Egypt using competing value framework (CVF), and department

as a unit of analysis. Results indicate that both clan and market organizational cultures are the dominant cultures that direct the shared values, assumptions and interpretations in most departments, whereas hierarchy culture is the least common one. These results were expected, given the special nature of the work environment in such institutions. This environment is characterized by respecting traditions and morals, feeling somewhat of the sense of family, but at the same time competitiveness and achieving superiority are the main attributes of it. In addition, it is not a surprise to find hierarchy culture as least common culture type in Egyptian higher educational institutions. All academic staff members regardless of their academic positions (assistant professor, associate professor, full professor) are guided and controlled by the same constitutions (Higher Education Law No. 49, 1972). Furthermore, work environment, however, cannot be described as a creative adaptable and flexible one; therefore,

adhocracy culture is not a common organizational culture type in such institutions.

On the other hand, current study found that clan, adhocracy, and market types were associated with most developmental indicators which were not the case with the hierarchy culture type. Our selected developmental indicators seem to be supported by the three culture types (clan, adhocracy and market). To achieve development, one needs teamwork, participation, cohesiveness, loyalty, interpersonal relationships and commitment (clan), creativity, adaptability, flexibility and working toward innovation (adhocracy), and at the same time, goal achievement, goal orientation and production are needed in the same context. Rules, regulation and uniformity, which are the main features of the hierarchy culture type, may hinder development in its earlier phase; it may be required later to gain stability and settlement.

Department size and specialty were not found to be predictive factors of specific organizational culture type. These results refer to similarities among departments in organizational culture, regardless of their own size and specialty, which could be considered as an advantage for deploying the appropriate culture for development. In addition, departments which adopt clan or market culture types were more likely to describe their

environments as facilitator or at least neutral with regard to development. The lack of adhocracy culture type in Egyptian higher education institutions may be one reason behind the absence of significant correlation between description of department as a facilitator and existence of adhocracy type. These results may be interesting to those who are in charge of the developing the higher educational system in Egypt.

Recommendations. Since Adhocracy culture type is found to be associated with development indicators, it is recommended to adopt it in Egyptian higher education institutions in addition to clan and market culture types. Teaching and educating people about current and future organizational culture seem to be important. Following the recommendation of Akdere and Schmidt (2007) that organizations should adopt continuous teaching for employees to learn about organizational culture, developing center in each university should insert a training program for disseminating organizational culture awareness continuously.

Future studies. The current researchers suggest applying CVF model in different types of service organizations to figure out the dominant organizational culture, and to discover the type/types of organizational culture that would enhance directly or indirectly the service quality in such organizations.

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Appendix A. The initial four-factor CFA model (Clan, Adhocracy, Hierarchy, and Market)
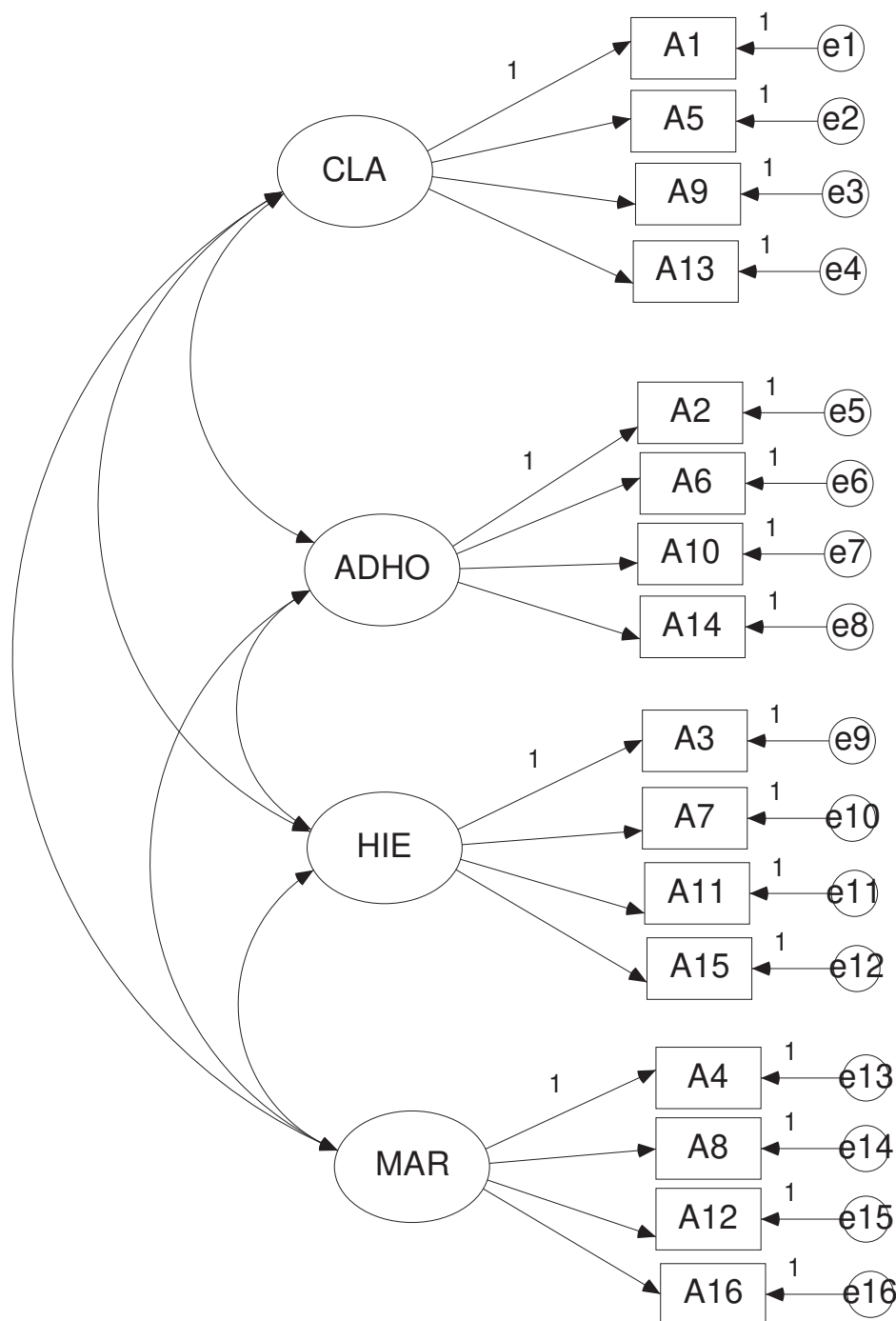
Notes: * CLA stands for Clan, ADHO stands for Adhocracy, HIE stands for Hierarchy, and MAR stands for Market.

Appendix B. Modified CFA model for organizational culture types
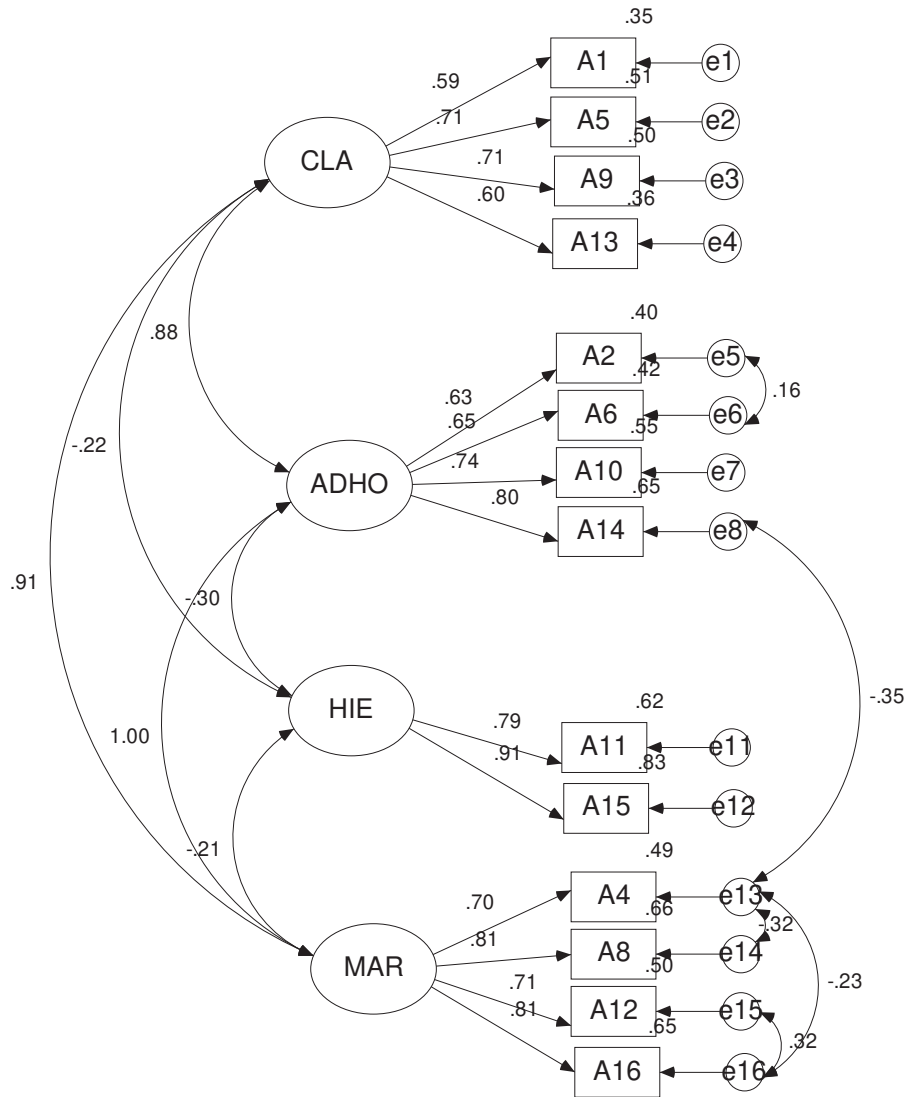
Notes: * CLA stands for Clan, ADHO stands for Adhocracy, HIE stands for Hierarchy, and MAR stands for Market.

Appendix C. Standardized item-factor loadings on each corresponding organizational culture type

Loading			Estimate	Significance
A1	<---	CLAN	.592	0.001
A5	<---	CLAN	.715	0.001
A9	<---	CLAN	.707	0.001
A13	<---	CLAN	.604	0.001
A2	<---	ADHOCRACY	.630	0.001
A6	<---	ADHOCRACY	.649	0.001
A10	<---	ADHOCRACY	.740	0.001
A14	<---	ADHOCRACY	.804	0.001
A11	<---	HIERARCHY	.786	0.001
A15	<---	HIERARCHY	.913	0.001
A4	<---	MARKET	.697	0.001
A8	<---	MARKET	.812	0.001
A12	<---	MARKET	.707	0.001
A16	<---	MARKET	.809	0.001

Appendix D. Internal consistency of the questionnaire scales

Scale	Item	Scale reliability	Scale reliability if item deleted
Clan	A1	0.75	0.71
	A5		0.67
	A9		0.67
	A13		0.71
Adhocracy	A2	0.80	0.78
	A6		0.77
	A10		0.74
	A14		0.71
Hierarchy	A11	0.84	0.62
	A15		0.83
Market	A4	0.84	0.82
	A8		0.78
	A12		0.82
	A16		0.79