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## A literature review on organizational culture and organizational effectiveness

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### ABSTRACT

*This paper is to review measures of organizational culture and organizational effectiveness, as well as their relationship. Firstly, a structured review of a number of organizational culture studies that has been accumulated in the past two decades is conducted. Secondly, contents of the studies are analyzed to identify commonalities and gaps, in order to suggest directions for further research. The contents of 69 articles are analyzed by using different approaches. This paper first classifies the previous studies based on criteria including the measure of organizational culture, the measure of organizational effectiveness, and the relationship between them. Next, theoretical model, type of organizational culture, measurement and relationship, etc. are further described in each article. Additional relevant contents such as sector, location, and methodology of the studies are also considered. Finally, basic descriptive analysis is conducted for categorizing the studies. It is found that competing values framework is the most widespread model in conducting research on organizational culture during the last two decades. The relationship between organizational culture and organizational effectiveness is strongly supported by numerous empirical studies. However, there is still mechanism in hide as an inconsistent of size effects and direction of the relationship. This issue requires more consideration on mediators, moderators and control variables for better understanding the role of organizational culture toward organizational effectiveness.*

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## 1 INTRODUCTION

Research on the topic of the organizational culture and its relationship with other organizational variables has become widespread since 1980s (Al Saifi, 2015), prominently conducted in Western countries (Chun *et al.*, 2013), and recently widened to some Asian countries such as China, Malaysia, Thailand, etc. (Kim Jean Lee and Yu, 2004). There are generally two main streams for the research on organi-

zational culture. The first one is about establishing the theoretical background, measuring and classifying of the organizational culture while the second centers on investigating the relationship between organizational culture and organizational effectiveness. Unfortunately, what is the most applicable measurement of organizational culture in different context? And how does organizational culture relate to organizational effectiveness – in respect of extent to which and direction of the relationship? These still remain controversial questions among

scholars and researchers (Hartnell *et al.*, 2011; Cui and Hu, 2012). For that reason, this paper statistically reviews the literature to explore the most acceptable measurement of organizational culture, especially in the environment of Vietnam. Also, this paper verifies the relationship between organizational culture and organizational effectiveness, along with explanations of possible hidden relations.

In Vietnam, the topic of organizational culture is not only increasingly concerned by researchers (Nguyen Viet Loc, 2009; Do Huu Hai, 2014; Nguyen Hai Minh, 2015; Do Thi Minh Phuong and Nguyen Tich Nghi, 2016) but also by practitioners in different areas including schools, hospitals, banks, other enterprises, etc. From government's perspective, organizational culture has been highlighted as an important factor for enterprise development. For example, at the workshop on "Building organizational culture, Vietnamese business culture for sustainable development", along with products quality, technology, and business capabilities, organizational culture is considered as an important resource, determining the success of enterprises (Mai Nguyen, 2016). In spite of a remarkable increase in discussion and practical implications of organizational culture in different organizations (FPT, Viettel, Vietcombank, Pvcombank, Vietinbank, Vingroup, etc.) the number of academic works in this term remains limited in Vietnam. Thus, the basic research on organizational culture and its relationship with organizational effectiveness would be of great significance for both managerial theory and practice.

For these reasons, this paper is aimed at providing a structured review of organizational culture literature that has accumulated in the past two decades. The second purpose is to conduct a basic descriptive analysis on the contents of the studies to identify commonalities as well as gaps, in order to suggest directions for further research, especially in Vietnamese context. By using some basic descriptive analyses, this paper is an attempt to organize the updated literature to identify similarities and differences; therefore, suggestions for further research is a modest academic contribution. Furthermore, organizational culture is an important tool in executive management (Denison, 2001), and cultural studies are rich and diversity in content (Hartnell *et al.*, 2011). It is not easy for managers as well as researchers, especially those who first study about organizational culture, to find reliable and updated research paper. Thus, in an effort to summarize and categorize organizational culture literature based on different criteria, this study will pro-

vide a reliable and update references source for managers and researchers who interested in this topic.

## 2 LITERATURE REVIEW

### 2.1 Organizational culture

#### 2.1.1 Background

In the 1970s, the prevalence of Japanese business success and the decrease in US firm's performance moved researchers to re-examine knowledge on organization management and behavior (Plakhotnik and Rocco, 2013). The seminal work, "On Studying Organizational Cultures" by Pettigrew (1979) was one of the first and valuable research utilizing anthropology-based cultural analysis into business organizations. This was followed by Ouchi (1981), Peters and Waterman (1982), Deal and Kennedy (1982), Denison (1990), and Gordon and Ditomaso (1992) exploring how organizational culture contribute to business success (Agbejule, 2011; Plakhotnik and Rocco, 2013). These researchers confirmed that certain values of organizational cultures lead to superior financial performance (Agbejule, 2011). For example, studies by Denison (1990) and Gordon and Ditomaso (1992) indicated that flexibility and adaptability values are associated with better financial performance (Agbejule, 2011). Since then, organizational culture has become a popular topic in business literature and been considered as a useful tool for enhancing organizational effectiveness (Denison, 2001).

#### 2.1.2 Definition

Organizational culture is the concept belonging to the organizational behavior and much reviewed in literature. A depth review of literature indicates that the definitions of organizational culture are numerous (Cui and Hu, 2012; Plakhotnik and Rocco, 2013). Fortunately, although scholars do show disagreement about a few certain themes, most of them have come to an agreement that organizational culture consists of a combination of values, beliefs, and assumptions shared by organizational members to guide them to the acceptable behavior in their organization (Hofstede, 2001; Huey and Zaman, 2009; Cui and Hu, 2012). Schein (2010) states that "*Organizational culture is a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid, and therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems*". This is the foundational and concise definition of organiza-

tional culture (Belias and Koustelios, 2014). Thus, this paper uses definition by Schein (2010), not only because it is the gold standard applied by numerous theorists and researchers (LaCasse, 2010; Al Saifi, 2015), but also because it encompasses the three key themes of organizational culture mentioned above.

According to Tharp (2009), Schein (2010) classified culture of an organization into three main categories:

(1)*Observable artifacts (symbols)* refer to an organization's attitudes, behaviors and beliefs, architecture, physical surroundings, products, technologies, style (uniform, art, publications, etc.), published values and mission statement, language, gossip, jargon, humor, myths and stories, practices, rituals, ceremonies, and taboos.

(2)*Espoused values (shared values)* are those championed by a company's leadership and management. They are distinguished from enacted values, that employees' actual behavior reflects. While the role of espoused values play in organizational culture is undeniable, many scholars claim that it is erroneous to ascribe values, which are located only in individuals, to a corporate entity or to a group of individuals. Thus, the espoused values particularly influence leaders and subsequently influences company behavior.

(3)*Basic assumptions* are underlying, often unconscious, determinants of an organization's attitudes, thought processes, and actions. These assumptions are central to its culture. Values that gain long-term acceptance often become so ingrained and taken-for-granted that individuals are usually unaware of their influence. They usually provide a tacit sense of security and an unquestioned impetus for perceptions and behavior.

According to the suggestion of Cui and Hu (2012), "the basic assumption is the original resource for the organization culture, but difficult for measure. The symbol would be visible and audible. However, they need professional skills, hard to master, to decipher them into the phase of culture. On the other hand, the shared value is the most accepted aspect in the research of organization culture due to its meaning and measurement". Following this suggestion, the shared values are considered as the key aspect to conduct a review on the relationship between organizational culture and organizational effectiveness in this paper.

### 2.1.3 Types of organizational culture

Along with the vast amount of definition, organizational culture has many categorizations. Types of

organizational culture are useful as basis for the diagnosing and comparing of phenomena in different companies and investigating the relationship with other organizational variables (Eckenhof and Ershova, 2011). Popular typologies/dimensions of organizational culture together with a list of references are summarized in Table 1.

As shown in Table 1, there are eight major models along with relevant types to assess organizational culture. Among them, the most applicable model for conducting research on organizational culture is the competing values framework (CVF) and its matched tool (organizational culture assessment instrument – OCAI) developed by Cameron and Quinn (1999). The CVF indicates that an organization consists of four culture types: clan, adhocracy, market and hierarchy. According to these authors, the above four cultural types can be briefly characterized as follows:

*Clan Culture:* This working environment is a friendly one. People have a lot in common, and it is similar to a large family. The leaders or the executives are seen as mentors or maybe even as father figures. The organization is held together by loyalty and tradition. There is great involvement. The organization emphasizes long-term human resource development and bonds colleagues by morals. Success is defined within the framework of addressing the needs of the clients and caring for the people. The organization promotes teamwork, participation, and consensus.

*Adhocracy Culture:* This is a dynamic and creative working environment. Employees take risks. Leaders are seen as innovators and risk takers. Experiments and innovation are the bonding materials within the organization. Prominence is emphasized. The long-term goal is to grow and create new resources. The availability of new products or services is seen as success. The organization promotes individual initiative and freedom.

*Market Culture:* This is a results-based organization that emphasizes finishing work and getting things done. People are competitive and focused on goals. Leaders are hard drivers, producers, and rivals at the same time. They are tough and have high expectations. The emphasis on winning keeps the organization together. Reputation and success are the most important. Long-term focus is on rival activities and reaching goals. Market penetration and stock are the definitions of success. Competitive prices and market leadership are important. The organizational style is based on competition.

**Table 1: Popular typologies/dimensions of organizational culture**

<b>Typology/Dimension</b>	<b>References</b>
The CVF and Organizational Culture Assessment Instrument (OCAI), by Cameron and Quinn (2006)	Cao <i>et al.</i> (2015); Sanz-Valle <i>et al.</i> (2011); Cerne <i>et al.</i> (2012); Eckenhofer and Ershova (2011); Chidambaranathan and Regha (2016); Willar <i>et al.</i> (2011); Prajogo and McDermott (2011); Deem <i>et al.</i> (2015); Schmiedel <i>et al.</i> (2015); Haffar <i>et al.</i> (2014); Ramachandran <i>et al.</i> (2011); Naranjo-Valencia <i>et al.</i> (2011); Singh (2013); Rawashdeh <i>et al.</i> (2015); Agbejule (2011); Gambi <i>et al.</i> (2015); Ahmadi <i>et al.</i> (2012); Valencia <i>et al.</i> (2010); Zu <i>et al.</i> (2011); Heritage <i>et al.</i> (2014); Asaad and Omer (2016); Carlstrom and Ekman (2012); Papadimitriou and Kargas (2012); Gupta (2011); Akhavan <i>et al.</i> (2014); Racelis (2010); Chun <i>et al.</i> (2013); Valencia <i>et al.</i> (2011); Uzkurt <i>et al.</i> (2013)
Organizational Culture Survey, by Denison and Neale (1996)	Arefin <i>et al.</i> (2015); Goromonzi (2016); Mousavi <i>et al.</i> (2015); Nikpour (2017); Amah and Ahiauzu (2013); Fey and Denison (2003); Laforet (2016)
Organizational culture index, by Wallach's (1983)	Deshpandé and Farley (2004); Silverthorne (2004); Hadian (2017)
Organizational Culture Inventory, by Cooke and Rousseau (1988)	Bigliardi <i>et al.</i> (2012)
OCTAPACE Organizational Culture, by Pareek (2003)	Erkutlu (2011); Carville and Sudha (2016)
Organizational Culture, by Physey (2004)	Alizadeh and Panahi (2013)
Organizational Culture Questionnaire	Erkutlu (2011)
<i>Hierarchy Culture</i> : This is a formalized and structured work environment. Procedures decide what people do. Leaders are proud of their efficiency-based coordination and organization. Keeping the organization functioning smoothly is most crucial. Formal rules and policy keep the organization together. The long-term goals are stability and results, paired with efficient and smooth execution of	

tasks. Trustful delivery, smooth planning, and low costs define success. The personnel management has to guarantee work and predictability.

The four cultural types in the CVF model can be assessed by using the OCAI which is developed by Cameron and Quinn (1999). The OCAI has six dimensions that correspond to the four organizational culture types including (1) dominant characteristics, (2) organizational leadership, (3) management of employees, (4) organization glue, (5) strategic emphases, and (6) criteria of success. By averaging all individual OCAI scores of the six cultural dimensions, organizational culture profile can be defined<sup>1</sup>. The validity and applicability of the CVF and OCAI have been supported by numerous empirical studies in different context (Lamond, 2003; Yu and Wu, 2009; Hartnell *et al.*, 2011; Cui and Hu, 2012). For example, Yu and Wu (2009) conducting a literature review on organizational culture have pointed out that prominent advantages of the CVF and the OCAI compared to other instruments are fewer dimensions but broader implications. In addition, a large amount of empirical studies has established the reliability and validity of the CVF (e.g. Cao *et al.*, 2015; Willar *et al.*, 2016; Chidambaranathan and Regha, 2016). Moreover, the CVF and the OCAI are increasingly used in the context of some Asian countries such as China, Malaysia, Indonesia, Thailand (e.g. Deshpande and Farley, 2004; Kwan and Walker, 2004).

From the above discussion, it can be suggested that the CVF and its matched scale OCAI are suitable for conducting research on organizational culture in Vietnamese context, especially for studies on describing organizational culture and on identification of culture types related to other organizational variables. Moreover, deeply integrating in the world economy of Vietnam has stimulated an increase in the number of firms in different area applying organizational culture as a useful management tool to achieve better outcome (Nguyen Hai Minh, 2015; Do Thi Minh Phuong and Nguyen Tich Nghi, 2016). However, appropriate organizational culture types or values for superior performance of Vietnamese firms in general and for a firm in particular have been inadequately explored by academic studies. Thus, it is a promising research field to study the prerequisite conditions of different culture types and the relationships between organizational culture types and other variables of organizational outcome, especially organizational effectiveness in the context of Vietnam.

Further, one may also expect to contribute towards literature by modifying the CVF through doing empirical studies.

## 2.2 Organizational effectiveness

The CVF theory suggests that different cultural types are expected to relate to different organizational indicators, especially organizational effectiveness (Cameron and Quinn, 2006). Organizational effectiveness is initially defined as the extent to which an organization meets its objectives (Angle and Perry, 1981). Up to date, the majority of scholars have come to an agreement that organizational effectiveness is a very complex concept. There is no one generally accepted definition (Cui and Hu, 2012). Typically, organizational effectiveness is a measure of what organizational goals are and how well those goals are achieved at the organizational level (Cameron, 2010). As the case of organizational culture, there are many perspectives in the literature concerning how to measure organizational effectiveness (Hartnell, *et al.*, 2011). An overview of measures of organizational effectiveness and corresponding matched variables is presented in Table 2.

As can be seen in Table 2, for measuring organizational effectiveness, researchers have been applying different approaches, mainly classified into three categories: financial, non-financial and long-term development by using subjective (judgmental) or objective method (Cui and Hu, 2012). Suggested by Dalton *et al.* (2003), the financial variables cannot reflect the contribution of intangible factors (e.g. employees' attitudes, employees' behaviors, information and knowledge management etc.) to organizational values. On the other hand, the non-financial variables cannot reflect the value added in term of capital investment. For most part, Cui and Hu (2012) have concluded that in most studies, the organizational effectiveness is not measured separately but jointly different aspects. For example, Amah and Ahiauzu (2013) examined the extent to which employee involvement influences organizational effectiveness. In their study, "organizational effectiveness" was measured by profitability, productivity, and market share using a five-point Likert scale (ranging from 1 strongly disagree to 5 strongly agree). In a study by Arefin *et al.* (2015), organizational effectiveness of a company was measured by comparing with its key competitors based on criteria including more successful, greater market share, faster growth, more profitable and more innovative.

<sup>1</sup> More details about the CVF and OCAI are available at <https://www.ocai-online.com>

**Table 2: The measures of organizational effectiveness**

Measures	Variable	References
Financial	profit rate, return on assets ratio (ROA), long-term profitability, sales growth rate, return on equity ratio (ROE), return on sales ratio (ROS)	Kaplan and Norton (1996), Morissette (1997), Ingy Essam (2017) Roi (2006), Coram <i>et al.</i> (2011)
Non-financial	employee satisfaction, customer satisfaction, turnover rate, quality of products/services, sales volume, communication effectiveness, relationship building, courtesy, helping, sportsmanship civic virtue, innovation, internal business processes, learning and growth	Kaplan and Norton (1996), Morissette (1997), Coram <i>et al.</i> (2011), Dossi and Patelli (2010)
Long term development	long-run development, competitive strength, or the long-run stock market performance	Liu (2003), Desai and Jain (1999)

In sum, there is no single indicator that would give a whole picture of the organizational effectiveness. Therefore, researchers should put a serious consideration in the variable selection based on type of organization, sector, and objective of the study. In addition, there is a prominent tendency that most researchers prefer subjective approach by using Likert scale and comparing with key competitors of the organization in measuring organizational effectiveness (e.g. Agbejule, 2011; Amah and Ahiauzu, 2013; Prajogo and McDermott, 2011; Arefin *et al.*, 2015; Rangriz and Soltanieh, 2015).

**2.3 Organizational culture and organizational effectiveness: The direct or indirect relationship**

The link between organizational culture and effectiveness has received much attention among researchers in the field of organizational culture (Ogbonna and Harris, 2000). Up to date, various studies have examined how organizational culture relates to organizational effectiveness. The main discussion of prior studies is that if an organization maintains a strong culture by demonstrating a well-integrated and effective set of specific values, beliefs, and behaviors, then it will perform at a higher level of productivity (Sorensen, 2002). For example, Ravasi and Schultz (2006) indicated that organizations with strong culture in which its staffs have the common values, showing the performance over those organizations that have weak cultures. Furthermore, Baker (2009) confirmed that as an organization develops a strong culture, a positive impact on productivity is realized, whereas a weak and inappropriate culture has a negative impact on work productivity.

Along with discussions on “strong” and “weak” culture, researchers also argued that certain types or values of organizational culture lead to superior or inferior organizational effectiveness. For example, Ogbonna and Harris (2000) showed that competitive and innovative culture traits are positively correlated to effectiveness, while community and

bureaucratic culture traits are negatively related to effectiveness. Valencia *et al.* (2010) found that while adhocratic cultures could enhance the development of new products or services, hierarchical cultures inhibit product innovation, thereby influencing organizational effectiveness. In a review on the basis of CVF theory, Hartnell *et al.* (2011) indicated that the adhocracy culture focused on innovative outputs; transformation; agility, dynamic and creative working environment are positively correlated to organizational effectiveness. By contrast, the effect of the hierarchy culture on organizational effectiveness is negative as this type of culture heavily focuses on a formalized and structured work environment with formal rules and policy, procedures and controlling. In addition, clan cultures dominated by friendly working environment, employee involvement, open communication and caring for the people have a significantly positive relationship with employee attitudes (Hartnell *et al.*, 2011).

Although the relationship between organizational culture and organizational effectiveness is strongly supported by prior studies, the issue of direct or indirect relationship is still controversial among researchers (Hartnell *et al.*, 2011; Cui and Hu, 2012). Recently, more and more studies have put much attention on verifying probable moderators or mediators to describe the indirect relationship between organizational culture and organizational effectiveness (e.g. Stoica *et al.*, 2004; Valencia *et al.*, 2010; Agbejule, 2011; Aktaş *et al.*, 2011; Nikpour, 2017). For example, Stoica *et al.* (2004) argued that the relationship between organizational culture and organizational effectiveness is influenced by the way that organizations search for and use information such as management accounting information. Aktaş *et al.* (2011) found that the stability or variability of internal and external organizational environment and the top manager’s values (self-direction and stimulation) play a moderator role on the relationship between organizational

culture and organizational effectiveness. The nature of the relationship between organizational culture and organizational effectiveness will be discussed in detail in the rest part of this paper.

Furthermore, to investigate the relationship between organizational culture and organizational effectiveness, researchers have applied different approaches. The popular ones are theoretical study and empirical study (Cui and Hu, 2012). In this paper, the analysis on the relationship between the mentioned variables is organized based on study's approach as follows:

The first and the most important approach is the theoretical perspective, which establishes the theoretical framework for the research of organizational culture. In this field, Barney (1986) and Arogyaswamy and Byles (1987) are pioneer scholars (Cui and Hu, 2012), followed by famous scholars such as Cameron and Quinn (1999), and Denison (1990). For example, Denison (1990) has built a model in his earlier research by combining 3 levels of culture by Schein (1984), and Quinn and Rohrbaugh's (1983) framework with flexibility versus control dimension. The Denison model groups an organization's culture into the four traits: (1) involvement (by employees in decisions and day-to-day tasks), (2) consistency (of organizational procedures), (3) adaptability (organizational change in response to customers and markets), and (4) mission (a sense of direction and performance expectations). Later on, Cameron and Quinn (1999) have developed an organizational culture framework built upon a theoretical model called the "competing values framework". This framework refers to whether an organization has a predominant internal or external focus, and whether it strives for flexibility and individuality or stability and control (Tong and Arvey, 2015). In generally, the theoretical research has established important theoretical background and requiring empirical studies to verify validity and applicability.

Secondly, there are numerous empirical studies on the direct relationship between organization culture and organizational effectiveness, which are the dominated research from Western countries (Fey and Denison, 2003). Peter and Waterman (1982) indicated a correlation between a strong culture and fiscal outcome. Similarly, Heskett and Kotter (1992) showed that adaptive cultures dominated by caring deeply about customers, shareholders and employees have a strong influence on performance of an organization while those cultures are characterized by arrogance, inward focus, and bureaucracy - features undermine an organization's ability to

adapt to change, thereby negatively influence the performance. All these studies may not tell the comprehensive picture in the relationship between organizational culture and organizational effectiveness, but confirm the important contribution of organizational culture in business success.

More recently, some researchers have supported the idea that the effect sizes of organizational culture on organizational effectiveness did not pass rule, indicating that these relationships are likely moderated, mediated or controlled by other variables (Hartnell *et al.*, 2011; Cui and Hu, 2012). For example, the results from a meta-analytic investigation of the relationship between organizational culture and organizational effectiveness conducted by Hartnell *et al.*, (2011) show that "52% of the effects are small, 36% are medium, and 12% are large" (p. 687), indicating that there is a significant variance in the effect sizes. In empirical studies, some variables (moderators, mediators and control) are considered for better understanding how organizational culture relates to organizational effectiveness. Knowledge management (Al Saifi, 2015), organizational learning (Sanz-Valle *et al.*, 2011), innovation (Cerne *et al.*, 2012), leadership (Ogbonna and Harris, 2000), management system (Agbejule, 2011), communication (Garnett, *et al.*, 2008), industry type and firm ownership (Naqshbandi *et al.*, 2015) together with organizational commitment (Chen, 2004; Nikpour, 2017) would be worthy variables for serious consideration. Among these, organizational commitment which is defined as "employees who will stay with organization through thick and thin, attends work regularly, puts in a full day, protects company assets, and who shares company goals" (Meyer and Allen, 1997, p. 24) and can be a mediator, as suggested by Cui and Hu (2012), Nikpour (2017) and Yildirim *et al.* (2016). Another worthy recommendation is that industry, national culture and number of informants would be potential moderators of the relationship between organizational culture and organizational effectiveness (Hartnell, *et al.*, 2011).

The above discussion on previous literature has supported the idea that the CVF and its matched OCAI can be one of the most applicable instruments of organizational culture. In addition, it is better to capture organizational effectiveness by various indicators rather than single indicators. The next section is going to statistically analyzing the contents of the studies to identify commonalities as well differences, which giving the direction for future research.

### 3 DESCRIPTIVE ANALYSIS AND KEY FINDINGS

#### 3.1 Searching literature

This paper used integrated approach grounded in a literature review of the core terms related to organizational culture and organizational effectiveness. The Proquest database and EBSCOHost Research Databases are used to conduct an electronic-keyword search for published research articles on the two main areas: organizational culture and organizational effectiveness. From the roughly 148 search findings, related articles were considered; after reviewing, 69 articles were chosen for this study based on the following criteria: (1) articles with reliable resources from peer-reviewed forums; (2) subject relevance to the research objective; (3) timeframe from the years 2000 to 2017. In addition, books, book chapters and theoretical studies, which had in their title the terms organizational

culture and organizational effectiveness were searched, using Proquest database, EBSCOHost Research Databases and Google Scholar. Eight various relevant books, book chapters and theoretical studies were reviewed and chosen.

#### 3.2 Coding variables

In order to combine and compare the information provided in the contents of 69 articles, the previous studies are classified based on criteria as follows: the measure of organizational culture, the measure of organizational effectiveness, and the relationship between them. Next, the theoretical models, types of organizational culture, measurement and relationship, etc. are further determined in each article. Additional relevant contents such as sector, location, and methodology of the studies are also recorded. Then, based on recorded variables, coding categories are developed and presented in Table 3.

**Table 3: The coding categories**

Variables	Explanation	Coding
Organizational culture	Organizational culture model	1: CVF; 2: Denison; 3: Others
Measurement of organizational effectiveness	Measurement of organizational effectiveness	1: Non-financial indicator 2: Financial indicator 3: Mixed
Correlation	The correlation between organizational culture and organizational effectiveness	1: Having correlation; 0: No correlation;
Extent	The size and direction of the relationship between organizational culture and organizational effectiveness	Numeric
Type of relationship	Direct or indirect relationship	0: Direct; 1: Indirect
Country	The study site/place	1: Europe; 2: USA; 3 Asia; 4: Others
Sector	Sector of organization	1: Manufacture; 2: Service

#### 3.3 Descriptive analysis and findings

Based on the foregoing discussion and Table 1 and Table 2, a total of 7 variables are identified, and each paper is classified based on whether a particular variable is presented or not (Table 3). This results in a matrix with 69x7 entries in Microsoft Excel. To identify differences and commonalities of the studies, the simple descriptive statistic was conducted. The significant findings are as follows:

- Of the 69 studies, 40 of them (58%) use the CVF model and its matched instrument (OCAI) for investigating organizational culture. The results from 38 of the 40 studies using CVF confirm the validity and reliability of the OCAI.

- Among 69 studies, 43 studies investigate the correlation between organizational culture and organizational effectiveness, 82% of them using

non-financial indicators to measure organizational effectiveness compared to only 9% for financial indicators and 9% for mixed approaches.

- There are 30 of the 43 studies (70%) highlighting the indirect relationship between organizational culture and organizational effectiveness, and the structural equation model (SEM) is the main analysis technique.

- The correlation between organizational culture and organizational effectiveness is demonstrated by most of the studies (98%). However, the size and the direction of the correlation is not always follow the same rule (Table 4). Table 4 shows the descriptive statistics of the correlations between different types of organizational culture based on the CVF model and the organizational effectiveness.

**Table 4: Results of descriptive statistics of correlation between types of organizational culture and organizational effectiveness**

Type of culture	N	Range	Min	Max	Mean	Std. Dev.	Variance	Case by Direction of correlation	
								Positive	Negative
Hierarchy	36.00	<b>1.10</b>	-0.45	0.65	<b>-0.04</b>	0.27	0.07	10.00	26.00
Market	32.00	<b>1.22</b>	-0.38	0.84	<b>0.23</b>	0.24	0.06	27.00	5.00
Adhocracy	37.00	<b>0.70</b>	-0.02	0.68	<b>0.32</b>	0.22	0.05	29.00	8.00
Clan	37.00	<b>1.38</b>	-0.52	0.86	<b>0.42</b>	0.28	0.08	35.00	2.00

As shown in Table 4, hierarchical culture generally has negative correlation with organizational effectiveness (26 cases and Mean of correlation is -0.04), while market, adhocracy and clan cultures tend to have positive correlation (M=0.23, M=0.32, M=0.42, respectively). Especially, in most cases, clan culture presents positive correlation with organizational effectiveness. Moreover, the ranges (the difference between the minimum and maximum values of the correlation) are high for hierarchy, market and clan culture, which indicates of large dispersion of the data. In sum, the results from Table 4 imply an inconsistency in the size and direction of the correlation between organizational culture’s types and organizational effectiveness. This finding supports the ideas that has been previously discussed on the forgoing section, indicating that the correlation between organizational culture and organizational effectiveness are likely moderated, mediated or controlled by other variables (Hartnell *et al.*, 2011; Cui and Hu, 2012).

**4 CONCLUSION AND SUGGESTIONS**

**4.1 Conclusion**

Through an integrated analysis of previous studies on organizational culture and organizational effectiveness during the last two decades, some important conclusions are drawn as follows:

Firstly, for measuring organizational culture, the CVF and its matched OCAI tool are suitable for quantitative research, especially for studies on describing organizational culture and on identification of culture types related to organizational effectiveness. However, a few of studies has not totally supported the validity and reliability of the OCAI (Hartnell *et al.*, 2011). Thus, modifying and revising the OCAI scale through qualitative research to fit with Vietnamese context are important.

Secondly, there is no single indicator that would give a whole picture of the organizational effectiveness. Therefore, researchers should put a serious consideration in the variable selection based on type of organization, sector, and objective of the study. In addition, there is a prominent tendency that most researchers prefer subjective approach by

comparing the indicators of the organization with their key competitors when measuring organizational effectiveness.

Thirdly, the results of the descriptive statistical analysis indicate that the relationship between organizational culture and organizational effectiveness is strongly supported by numerous studies. However, the sizes and the direction of the relationship does not always pass the rule, which refers possible moderators, mediators or controllers. Recently, the role of some variables such as knowledge management, organizational learning, management accounting system, quality techniques, industry, environmental uncertainty, authenticity, organizational commitment, company age, size and ownership, etc. has been considered in the relationship between organizational culture and organizational effectiveness. Unfortunately, the results are still inconsistent. Thus, this issue needs to be clarified by more empirical studies with seriously consideration of possible hidden variables.

**4.2 Suggestions for further research**

Drawing on the above conclusion on the measures of organizational culture and organizational effectiveness, together with the relationship between the two variables and the possible mediators, moderators and controllers, suggestions for further research are proposed. Firstly, the CVF model and its matched OCAI can be a worthy adaptation to describe organizational culture. Secondly, investigating the relationship between organizational culture and organizational effectiveness with serious consideration on the role of possible mediators, moderators and controllers can be a promising research field. Doing that is expected to make a moderately contribution to clarify the inconsistent of the size and direction of the relationship between the two variables.

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