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Assessing the Organizational Culture of Family Owned Firms in Sudan

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Abstract: This study aims at assessing and exploring the organizational culture in the Sudanese family firms. The study tries to identify the types of the Sudanese family firms according to the degrees of family involvement in the business and assesses the orientation of the Sudanese family firms toward different organizational cultural typologies and then examining the relationship between the types of the family firms and the different typologies of the organizational culture. To achieve the study objectives, the organizational culture assessment instrument (OCAI) derived from the competing values framework is adopted which identifies four typologies; Clan, Adhocracy, Market, and Hierarchical culture. Among 130 Sudanese private family firms originally contacted, 103 agreed to participate in the study. The findings of the study indicate the heterogeneity of the Sudanese family firms based on the components of involvement, and the different types of the family firms exhibit different cultural typologies according to the level of family involvement in the business.

Keywords: Organizational culture; Family firms; Family involvement; Competing values framework; OCAI; Sudan

1. Introduction

Family firms are considered a form of organization with unique characteristics and special importance. It has been receiving an increasing awareness and legitimacy as a field of study during the last 20years (Sirmon, 2014).There are many differences between family firms and nonfamily firms, and one of the most important differences is the organizational culture. According to Denison (2004)culture takes on an even more complex dimension particularly when considered in the context of family business because of the significant role of the founder during the entrepreneurial period as well as the successive stages. Chrisman, Chua and Steier (2002) also assume that organizational culture is even of specific importance in the sphere of the family firm, because the values, beliefs and interests, highly influenced by those of the family and family relations. Family firms in general experience greater commitment between their employees and the firm(Vallejo, 2008). Vallejo (2008)argues that it can be a result based on a better working environment and organizational harmony that focuses on long-term sustainability. Family business values as well as corporate culture in family businesses are widely discussed in the literature (e.g. Ainsworth and Wolfram Cox, 2003; Aronoff, 2004; Astrachan et al., 2002; Denison et al., 2004; Dyer, 2003), but often without enough studiesin the characterization of the organizational culture on family firms (Sanchez-Marin, Danvila-del-Valle, & Sastre-Castillo, 2017).Despite many researchers have studied the different impact of culture on performance between family and nonfamily companies, and the influence of the founder in creating organizational culture, there is a lack of sufficient empirical evidence on the characterization of the organizational culture on family firms particularly in the Sudanese context. First the literature continues to have difficulty defining the family firm and many empirical studies do not operationalize what is meant by family firm (Kayser & Wallau, 2002). Second there is a need for a better understanding of the organizational culture in the Sudanese family firms and examining the different cultural typologies in different types of the Sudanese family firms. Thus in order to explore the organizational culture of Sudanese family firms, this study tries to achieve three objectives through utilizing the methodology applied by (Sanchez-Marin,Hernández**,** Danvila-del-Valle, & Sastre-Castillo, 2017);first, identifying the degrees of family involvement in the Sudanese family firms through operationalizing the definition of the family firm based on the components of *ownership,* *management*and *family succession* proposed by (Chua, Chrisman, &Chang, 2004). Second, characterizing the four organizational culture typologies among the Sudanese family firm**s**. Finally, examining the relationship between the different organizational culture typologies and different types of family firms.

The rest of the paper is organized as follows, the next section includes the literature review, the third section discusses the methodology, the fourth section presents the analysis and the results, and finally the fifth section concludes the paper.

2. Literature Review

2.1 Organizational culture

Organizational culture is a concept that has received increasing attention (Denison, 1996; Hatch, 1993), and is widely defined (Schein, 1983). For example as the set of beliefs, expectations and basic principles shared by the members of an organization (Schein, 1995), also can be defined as a pattern of shared basic assumptions, beliefs and values that allow a group to solve its problems that are considered valid and can be taught to new members as being the appropriate way to perceive, think and feel in relation to those problems within a particular (Schein, 2004). Given these different definitions of organizational culture, the adopted definition for this paper is stated by Harrison (1993) as the "distinctive constellation of beliefs, values, work styles, and relationships that distinguish one organization from another", since one of the main objectives of this study is to characterize the organizational culture of the family firms. The study also the takes primarily the integration perspective stance in studying the organizational culture which assumes that all cultural aspects are consistent and reinforce each other (Martin 2001). Among many cultural models that take an integration perspective stance (Schneider 1999, Deal &Kennedy 1982 and Cameron &Quinn2006),Cameron and Quinn model is chosen due to the fact that this framework was empirically derived, has been found to have both face and empirical validity and helps integrate many of the dimensions proposed by various authors (Cameron &Quinn, 2006).

2.2 Family firm definitions and theories

Three major definition streams among researchers can be identified; *the components of involvement approach,*Chrisman et al. (2005) argue that family involvement in ownership, governance, and management is what makes a firm a family firm.*The essence approach,* the core argument of this approach is that family involvement per se is not enough. Family involvement must lead to behavior that produces certain distinctiveness (Chrisman, 2005).*The scale approach,*which is suggested to differentiate levels of actual and potential family involvement in a business and aimed at developing a theory-based scale. The paper adopts the definition of (Chua, Chrisman & Sharma, 1999), the definition identifies three components of ownership, management, and family succession to determine the extent and the degree of family involvement in a business.

2.3 Organizational culture of the family firms

When considered in the context of family business, culture takes on an even more complex dimension (Denison, Lief, L. Ward 2004). One of the models that has been used in the literature to understand and explore the culture of the family firm is based on cultural typologies suggested by Cameron and Quinn (1999) derived from the competing values framework.This model has studied the organizational culture within the frame of two dimensions: internal versus external focus and stability versus flexibility, the results are four culture types. Clan-type firms seemed more like extended families than economic entities. Instead of the rules and procedures of hierarchies or the competitive profit centers of markets, typical characteristics of clan type firms were teamwork, employee involvement programs, and corporate commitment to employees(Cameron &Quinn, 2006). *The Adhocracy Culture* represents an organizational form that is most responsive to the hyper turbulent, ever-accelerating conditions, those firms are innovative, and that the major task of management is to foster entrepreneurship, creativity, and activity "on the cutting edge."(Cameron &Quinn, 2006). In *Market culture* profitability, bottom-line results, strength in market niches, stretch targets, and secure customer bases are primary objectives of the organization and the core values that dominate market-type organizations are competitiveness and productivity. Finally, *Hierarchy culture* which is characterized by a formalized and structured place to work. Procedures govern what people do. Effective leaders are good coordinators and organizers. Maintaining a smooth running organization is important. The long-term concerns of the organization are stability, predictability, and efficiency. Formal rules and policies hold the organization together (Cameron &Quinn, 2006).

3. Methodology

3.1 Variables

The basic premise underlying the studies the Sudanese family firms may exhibit different organizational cultural typologies depending on their level of family involvement in the business (i.e. Management, Ownership, and Generational Succession). Accordingly the study analyses the different typologies of organizational culture in the Sudanese family firms as dependent variables which include clan, adhocracy, market and hierarchy culture and utilizes the methodology applied by (Sanchez-Marin,Hernández**,** Danvila-del-Valle, & Sastre-Castillo, 2017). The paper also studies the impact of the type of the Sudanese family firms on the organizational culture. The Sudanese family firms can be classified into two types based on the three components of family involvement on the business (ownership, management, and generational succession); Family owned and managed firms, Family owned and professionally managed firms. In this paper, three control variables are identified; *Firm size* which can influences the organizational culture as long as the culture manifested in the relationships between members, *Economic sector* which can influence the organizational culture since the work related values may vary between industries and *Firm age*.

3.2 Data collection and sampling

Given the stated objectives, the dominant methodology in this study is descriptive and quantitative research design. The population of study is the Sudanese family private companies. The accessible population is the Sudanese family private companies that located in Khartoum City. The key respondents are business founders (owners) and/or the managers who are the key decision makers and determinant of business survival. Since there is no legal definition or database of Sudanese family firms, and it’s not possible to determine the exact sample frame, therefore two types of non-probability sampling methods are used to distribute the questionnaires in this study, convenience sampling and snowball sampling. The sampling process starts by convenience sample with a list of major Sudanese private family business given by the National Investment Authority, Department of Information and Statistic. This list contains more than 50 private family firms from different economic sectors classified as major and popular family firms in Sudan, all of them will be included in the study. This process is completed using snowball technique. From the supply chain of 50 listed private family firms, 80 family firms has been identified and included in the study. Total 130 questionnaires have been distributed as printed hard copy, and via email as online questionnaire form. The questionnaires have been distributed among the managers and the owners of 50 family firms listed by the National Investment Authority, Department of Information and Statistic, at the same time, they have been asked to distribute the questionnaire among other managers and owners of other family firms in their supply chain, as snowball sampling process. Of the 130 firms originally contacted, 103 agreed to participate, resulting in a response rate of 79.23%.

3.3 Measurements

The four cultural variables have been measured by the validated Organizational culture assessment instrument (OCAI). There are six content dimensions can be considered as the foundation for the Organizational culture assessment instrument (OCAI); the dominant characteristics of the organization, the leadership style, the management of employees, the organizational glue, the strategic emphases, and the criteria of success. The study measures the four culture variables among the Sudanese family firms using (OCAI) as follows, the twenty four items of this instrument are utilized. The items are gathered in six statements which measure different dimensions of culture mentioned above. Each statement has four alternatives or responses (*a, b, c, d*), (*a)* responses are related to clan culture, *(b)* responses are related to adhocracy culture, *(c)* responses are related to market culture, and *(d)* responses are related to hierarchical culture. Each alternative (culture variable) is measured on a continuous scale taking a value from 0 to 100. For each dimension, the sum of the values assigned to the four alternative should be equal to 100. Also by performing k-mean cluster analysis, the "types of the family firm" as independent variables will be generated using the three components and then the extent to which, each one of the three components of family involvement in the business has a significant impact on the classification (clusters) of the family firms will be assessed.

4. Analysis and Results

4.1 Descriptive statistics

Descriptive statistics and correlation matrix are shown in Table 1 and 2 respectively, Table 1 presents the characteristics of the Sudanese family firms under study. As Table 1 shows the majority of the Sudanese family firms included in the study are small and medium business (1-250 employees) which constitute 69.6% of the total sample, 33% of the Sudanese family firms are manufactural, 7.8% are agricultural, 9.7 % from health sector, 6.9% are educational, and 42% from other sector including export and import, IT, and services. Also Table 1 shows that 37% of the family firms work for more than 10 years, and 57% for less than 10 years.

The results in Table 2 show that there are significant correlations between the culture variables and the Sudanese family firm types, although none of them are very high, indicating that there are no problems of multicollinearity. It’s noticeable that the Clan culture is positively and significantly associated with the two types of Sudanese family firms, however family owned and managed firms obtained higher coefficient of correlation ($p< 0.05$). Regarding Market culture variable, the result reveals that also the existence of a significant relationship with the two types of family firms, but higher and positive significant relationship with the Sudanese professionally managed firms. Finally regarding both Adhocracy and Hierarchical culture, the results indicate the non-significant association with the two types of Sudanese of family firms, however with respect to the adhocracy culture the coefficient of correlation were the lowest.

Table (1) The characteristics of the Sudanese family firms under study

		Frequency	Percent
The size of the firm based on the number of employees	1- 49 employees.	35	34.0
	50- 250 employees.	36	35.0
	More than 250 employees.	32	31.1
	Total	103	100.0
The economic sector under which the firm operates	Manufactural	34	33.0
	Agricultural	8	7.8
	Health	10	9.7
	Education	7	6.8
	Other	44	42.7
	Total	103	100.0
The age of the firm	1-5 years	29	28.2
	6-10 years	29	28.2
	More than 10 years	38	36.9
	Total	96	93.2
	Missing	7	6.8
	Total	103	100.0

Table (2) Correlation Matrix

Variables	1	2	3	4	5	6
1.Family owned and managed firms	1					
2. Family owned and professionally managed firms	.318**	1				
3. Culture: Clan	.251**	.20*	1			
4. Culture: Adhocracy	-.02	.008	.236*	1		
5. Culture: Market	-.199*	.305**	-.555**	.132	1	
6. Culture: Hierarchy	-.118	.072	.468**	.796**	-.158	1

*p < 0.1.
**p < 0.05.

4.2 Reliability of Organizational Culture Typologies

The internal consistency is assessed for each of the four culture variables i.e. clan, adhocracy, market, and hierarchy culture, using the Cronbach alpha which is useful to estimate the internal consistency associated with scores that derived from a particular scale.

Table (3) Reliability of organizational culture typologies

Construct	***Number of items***	***Cronbach alphas***
Clan	6	.844
Adhocracy	6	.748
Market	6	.812
Hierarchy	6	.751

As Table 3 shows the Cronbach alphas are satisfactory for all cultural variables and show acceptable levels of reliability. The organizational culture assessment instrument (OCAI) as measurement has six dimensions, each dimension has four items, and the reliability test has been run for each cultural typology separately.

4.3 First objective: Identifying the degrees of family involvement in the Sudanese family firms

In this part of analysis, K-Mean cluster analysis is applied to identify the different types of the Sudanese family firms based on the degrees of family involvement in those firms. After performing k-mean cluster analysis, the "types of the family firm" as independent variables are generated using the three components of family involvement in the business (ownership, management, and generational succession) and then, the extent to which the three components have a significant impact on the classification (clusters) of the family firms is assessed. The three component of the "family involvement" are used as variables for clustering, and have been measured. Ownership has been measured as a continuous variable taking value from 0% to 100% based on the amount of ownership of the firm that the family has. Management has been measured as a continuous variable taking value from 0% to 100% based on the percentage of family managers over total managers in the firm. Generational succession has been measured as a dichotomous variable based on the family intension to continue the business taking the value1 when the family plans to continue with the business and 0 if not. Since this analysis requires initially to indicate the number of clusters that will be generated in the final solution, two clusters has been chosen based in the three components of "family involvement" mentioned above, this number of clusters has been derived theoretically according to the context and the objective of study. The data of the clustering variables have been standardized before performing the analysis (transforming the variables such that they have mean zero and standard deviation one), the above steps are iterated for three times when the cluster assignments stop changing.

Table (4) Cluster analysis for the Sudanese family firm types

	Cluster		F	Sig
	1	2		
Ownership	-.20205	.37983	8.132	.005
Management	-.57046	1.14887	196.376	.000
Generational succession	-.23505	.47173	12.442	.001
Number of firms in each cluster	67	34		

The results indicate that the Sudanese family firms can be classified by cluster analysis which uses the three dimensions proposed previously, two firm clusters are identified. The iteration history shows that the model is stable, since the third iteration have (.000) value for the two clusters. Table 4 shows that all three components of family involvement have a significant impact on both clusters, however they are different in terms of their impact on the clusters generated, which indicate that the three clustering variables are useful to operationalize the definition of the Sudanese family firms and to capture the differences among them.By referring to cluster membership and the descriptive statistics for each cluster, it can be observed that cluster 1 represents 65.68% of the firms, the means of the components of ownership and management are 84.54 (more than 50%) and 23.55 (less than 50%) respectively. Second, cluster 2 represents 33.33% of the firms, the means of the components of ownership and management are 95.44 (more than50%) and 77.91(more than 50%) respectively. In this study, Cluster 1 represents the "*family owned and professionally managed"* firm type which described by a majority family ownership (84.54, more than 50%), but with minority of family managers over the total managers (23.55 less than 50%)

and the family plans to continue the business. While Cluster 2 represents the" *family owned and family managed"* firm type which described by a majority of family ownership (95.44, more than 50%) and majority professional managers over the total managers (77.91, more than 50%), and the family plans to continue the business.These results support the assumption of heterogeneity of Sudanese family firms and then the "family firm type" variable can be generated, this variable can take one of two forms.

4.4 Second objective: Characterizing the four organizational culture typologies among the Sudanese family firms

As shown in Table 5 the clan culture is predominant with the highest mean value over the all other cultural orientations (μ= 167.29), these results indicate that the orientation toward clan culture in Sudanese family business is high; focusing on the team working, consensus and participation. The results also show the orientation of the Sudanese family firm towards market culture can be considered high (μ=153.05) meaning that they have special focus on creating competitive advantage, focusing on Profitability, results-oriented, strength in market segment, productivity, and secure customer bases are primary objectives of the organization. Followed by the hierarchical culture (μ=147.32) which indicates that the family owned and managed firms have less orientation towards hierarchal culture since the family has high level of ownership and management, and tend retain control over the company. The results also indicate that there is a little orientation of Sudanese family firm toward adhocracy culture (μ=130.13) meaning that they have less ability to response to the hyper turbulent, ever-accelerating conditions, they are less flexible and less creative.

Table (5) The organizational culture orientations of the Sudanese family firms

	N	Minimum	Maximum	Mean	Std. Deviation
The percentage of *ownership* that family has	102	30	100	88.32	18.739
The percentage of the *family managers* over the total managers	102	5	100	41.59	31.617
Clan culture	103	60	325	167.29	61.286
Adhocracy culture	103	55	280	130.13	45.207
Market culture	103	80	250	153.05	38.806
Hierarchal culture	103	50	255	147.89	39.890

4.5 Third objective: Examining the relationship between the organizational culture and different types of family firms

To examine the degree of matching of the four organizational culture variables among different types of Sudanese family firms in order to achieve the objective of the study, hierarchical multiple regression analysis is utilized to test whether the relationships between each type of Sudanese family firms and the four culture variables are significant or not. Four hierarchical multiple regression models have been conducted. The Dependent variables are Clan, Adhocracy, Market and Hierarchy culture, respectively. The Independent variables are the Sudanese family firm types included as dummy variables (family owned and managed firms, and professionally managed family firms) and the three control variables (size, economic sector, and age). The control variables are included in the analysis to avoid the spurious relationships. The dummy coding is one of three ways that are used to recode the categorical data in which the categorical variable recodes into different variables that the number of new variables are one less than the number of categories, nevertheless, a categorical variable should have at least three levels to be recoded, in the case of this study the “family firm type” variable has only two levels which mean that needn’t to be recoded. The first step introduces only the control variables.The second step introduces the first type of the Sudanese family firms; family owned and managed firms as independent variable. The third step includes the second types of the Sudanese family firms representing the professionally managed family firms. The results of ΔR^2shown in Table 6,7,8 and 9, for clan, market, and partially for hierarchically culture variables reveal that the types of the Sudanese family firms significantly can influence the adoption of each one of them, thus the family firm types significantly related to those organizational cultural variables, however the results of ΔR^2 for adhocracy culture show non-significant change for all models which indicate the non-significant relationship between this culture and the two types of the Sudanese family firms hence, the type of the Sudanese family firms doesn't affect the adoption of this culture.

Table 6 indicates that at the first stage, the control variables account for 19.3% variation in clan culture variable. Introducing the family owned and managed firm as predictor explained in additional 3.7% of variation in clan culture variable, this change in R^2 is significant ($p < 0.05$). While adding the professionally managed family firm to control variables in stage one results in additional 1.1% of variation ($p < 0.1$).

Table (6) The hierarchical regression for Clan culture

Predictors	*Clan culture*		
	1	**2**	**3**
Firm size	.079	.066	.079
Economic sector	-.055	-.047	-.060
Firm age	-.402***	-.403***	-.414***
Family owned and managed firm		.205**	
Professionally managed family firm			.119
R^2	0.193	0.230	0.204
ΔR^2		0.037**	0.011*

*P** < 0.1, *p*** < 0.05, *p**** < 0.01.

Table (7) The hierarchical regression for Adhocracy culture

Predictors	*Adhocracy culture*		
	1	2	3
Firm size	.014	-.027	.011
Economic sector	-.120	-.100	-.112
Firm age	-.313***	-.316***	-.311***
Family owned and managed firm		-.107	
Professionally managed family firm			.016
R2	0.111	0.117	0.113
Δ*R2*		0.006	0.002

*P** < 0.1, *p*** < 0.05, *p**** < 0.01.

By referring also to (model 2), and (model 3) in Table 6, it's noticeable that the family owned and managed firm recording a higher Beta value (β = .205, p < .0.05) than the professionally managed family firm (β = .119, p > .1), and indicating the significant influence that the family involvement in management and ownership have on adopting a clan culture As shown in Table 7, the hierarchical regression results reveal that the control variables account for 11.1% variation in adhocracy culture variable. Introducing the family owned and managed firm as predictor explained in only 0.6% of variation in adhocracy culture variable, this change in R^2 is not significant regarding this variable ($p > 0.1$). While adding the professionally managed family firm to control variables in stage one results in 0.2% change in R^2 which is a very low additional variation and non-significant. When comparing (model 2) with (model 3), it can be found that both of Family owned and managed firms, and professionally managed firms have less orientation toward this cultural typology (model 5, β = -.107, p > 0.1, model 6, β = .016, p > 0.1), however family owned and managed firms has higher negative beta value than professionally managed firms.

Table (8) The hierarchical regression for Market culture

Predictors	*Market culture*		
	1	2	3
Firm size	.252**	.166	.261**
Economic sector	.177*	.207*	.141
Firm age	.038	.035	-.004
Family owned and managed firm		-.183*	
Professionally managed family firm			.226**
R^2	0.158	0.179	0.19
ΔR^2		0.021**	0.032**

*P** < 0.1, *p*** < 0.05, *p**** < 0.01.

Table 8 shows the hierarchical regression results indicating that at stage one, the control variables account for 15.8% variation in market culture variable. By adding the family owned and managed firm as predictor explained in additional 2.1% of variation in market culture variable, this change in R^2 is significant ($p < 0.05$). While adding the professionally managed family firm to control variables in stage one results in additional 3.2% of variation in the culture variable also a higher and significant change in R^2. From (model 2) and (model 3) results that shown in Table 8 its noted that professionally managed firm recording a higher Beta value (β = .226, $p < 0.05$) than the family owned and managed firm (β = -.183, $p > .1$).

Table (9) The hierarchical regression for hierarchy culture

Predictors	*Hierarchy culture*		
	1	2	3
Firm size	-.210*	-.129	-.212*
Economic sector	.019	-.016	.036
Firm age	.489***	.493***	.518***
Family owned and managed firm		-.027	
Professionally managed family firm			.050
R^2	0.145	0.154	0.16
ΔR^2		0.009	0.015*

*P** < 0.1, *p*** < 0.05, *p**** < 0.01.

As shown in Table 9 the hierarchical regression results reveal that at the first stage, the control variables account for 14.5% variation in hierarchical culture variable. By adding the family owned and managed firm as predictor explained in only additional 0.9% of variation in hierarchical culture variable, this change in R^2 is non-significant ($p > 0.1$). While adding the professionally managed family firm to control variables in stage one results additional 1.5% of variation in the culture variable which is a higher and significant change in R^2. Comparing (model 2) and (model 3) in Table 9, its noticeable that both of Family owned and managed firms and professionally managed firms have less orientation toward hierarchical cultural typology (model 11, β = -.027, $p > 0.1$, model 12, β = .050, $p > 0.1$), however professionally managed firm has higher and positive beta value than family owned and managed firms. The results reveal that both types of Sudanese family firms have less influence in the adoption of this culture, and the extent to which the family involves in the business doesn’t affect the orientation toward this culture.

To sum up the results indicate that there is partially a significant relationship between the types Sudanese family firms and the adoption of particular organizational culture typology; for clan culture, the two types of the Sudanese family firms have shown significant orientation toward this typology, however the family owned and managed firms type has greater orientation toward it which indicates that the high degree of family involvement in the management has influence in the tendency of the family firms to exhibit clan culture typology. Regarding market culture, the results show significant differences in the orientation of the two types of Sudanese family firms; the professionally managed firms have positive and significant influence in the adoption of this culture, while the Sudanese family owned and managed firms have negative but significant impact on the adoption of market culture which means that the family involvement in management may have negative influence in the tendency of the Sudanese family firm towards values of market culture. In case of hierarchical culture, the results indicate that the Sudanese professionally managed firms have greater influence in the adoption of this culture while the Sudanese family owned and managed firms have negative but non-significant effect in the adoption of this type of culture indicating that the non-family managers and low degree of family involvement the management have positive effect in the tendency of family firms to exhibit this typology. Finally, with regard to adhocracy culture, the results reveal that there are no significant differences between the two types of the Sudanese family firms in the adoption of this culture typology which mean that the degree of family involvement in management has no effect on the orientation of the family firm towards this culture.

5. Conclusion and discussion

This paper aims at assessing and exploring the organizational culture in Sudanese family firms by using The Organizational Culture Assessment Instrument (OCAI) which is based on the Competing Values Framework and uses four culture types: Clan Culture, Adhocracy Culture, Market Culture, and Hierarchy Culture, assessed among different degree of family involvement in Sudanese family firms. The main objectives of this study are: *(a)*identifying the degrees of family involvement in the business by considering the three components of *ownership, management,* and *family succession* (Chua, Chrisman, &Chang, 2004). *(b)*Characterizing the four organizational culture typologies among the Sudanese family firm**s**. *(c)*Examining the relationship between the different organizational culture typologies and different types of family firms.

The results indicate that the three components of family involvement in the business (ownership, management, and generational succession) can be used to operationalize the definition of the Sudanese family firms and to cluster them since they have significant impact on each cluster,two clusters of Sudanese family firm are identified: *Family owned and professionally managed firm* And *Family owned and family managed firm* type. Also the findings revealed the heterogeneity and diversity of the Sudanese family firms based on the components of involvement approach which is related to the concept of familiness. The results show that the Sudanese family firms exhibit different organizational cultural typologies according to different amount of ownership that the family has and the number of family managers over the total mangers in the firm. Large percentage of Sudanese family firms are oriented toward clan and market culture, while less percentage toward hierarchal and least percentage toward adhocracy. The results show that the organizational culture significantly varies according to the type of the family firms. Specifically, the results show, confirming partially the variation of organizational culture through different types of family firms, and the influence of the degree of family involvement in the management on the adoption of a particular culture; the Sudanese family owned and managed firms have greater orientation toward clan culture than professionally managed firms, both of the Sudanese Family managed firms and professionally managed firms have less orientation toward adhocracy cultural typology, this means that both types of family firms are less innovative, less creative in terms the orientation toward developing new products and services, alsothe Sudanese professionally managed firms have greater orientation toward market culture than the family owned and managed firms. Professionally managed family firms may have greater focus on competitiveness and productivity in the market, finally the study finds that both of the Sudanese family owned and managed firms, and professionally managed firms have less orientation toward hierarchical cultural typology.

This study also has important implications for practitioners. Both of Sudanese family firm types whether family or professionally managed need to be more oriented toward particular cultural typology i.e. adhocracy culture in order to be able to cope with and adapt to changing environment. Also, the Sudanese family managed firms need to pay attention to market culture, family mangers may have less orientation toward the market and they are more conservative in making decision related to competitiveness and productivity in the market which are achieved through a strong emphasis on external positioning and control. The cultural approach that has adopted serves as a way to advance overall understanding of Sudanese family firms by doing so, it may open up research areas that were previously unquestioned. This study assumes the uniqueness and distinctive of Sudanese family firms, the uniqueness may stem from the cultural typology, values, beliefs, “way of doing things” that the family firms exhibit, the role that the culture play in such type of firms and the expected influence of the organizational culture in the performance of the Sudanese family firms. This study also shows how the basic values and beliefs of Sudanese family firms can be quantitatively measured using the organizational culture assessment instrument. Better understanding to the distinctiveness of family firms in general and Sudanese one in particular could be achieved by considering other aspect beside the organizational culture such as governance, corporate social responsibility, Interpersonal family dynamics, and family social capital. Another angle through which to enhance the understanding of organizational culture of the Sudanese family firms is by adopting additional cultural models such as Denison organizational cultural model which characterizes the mutual influence of the four cultural factors upon the organization's efficiency: mission and consistency, adaptability and involvement.

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