

**CULTURAL CLUSTERING OF NATIONS BASED ON
TROMPENAARS'S DIMENSIONS OF NATIONAL CULTURE: A
MULTIVARIATE CLUSTER ANALYSIS APPROACH**

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ABSTRACT

With increasing globalization, business activities are transcending national boundaries. Multinational corporations are agents of such globalized business operations and catalyze cross border commercial and industrial ventures. Dealing with different nations obviates exposure to different national cultures and managing the complexity arising out of the multiplicity of cultures. Thus management of international business, in essence hinge on compatibility of the management styles with different national cultures. National culture has certain distinguishing dimensions as professed by scholars like Hofstede and Trompenaars & Hampden-Turner. An understanding of these dimensions and the relations in between them will help international business management in monitoring and assessing the cultural environments and in formulating and executing successful and appropriate business strategies. This paper identifies three cultural clusters of the different nations of the world based on the different dimensions of national culture as identified by Trompenaars and Hampden-Turner.

Key Words: National Culture, International Business, Trompenaars & Hampden-Turner, Dimensions of National Culture, Cultural Clusters.

Introduction

An understanding of different national cultures is important in all aspects of international business management. Since international business is becoming increasingly important with growing magnitude of globalization of commercial activities, knowledge of national cultures is important in interpreting results of environmental scanning. An understanding of national

cultures is also important to the formulation and execution of strategies in international business management. Trompenaars & Hampden-Turner found in their research that national culture is influential enough to overwhelm corporate cultures. International business management deals with multiplicity of national cultures and as such an understanding of these differences is crucial in formulating and executing business decisions in different countries. A certain management style or practice might be successful in one nation, but fail in another. Because of cultural differences, managerial style and practices in different functional areas of management must be tailored to fit the particular country-specific situations. Knowledge of the differences in national culture is thus a vital determinant for successful international business management. Moreover, it is impossible to design business strategies for individual nations. Identifying clusters of nations which are similar or at least culturally closer to each other, would facilitate designing of a manageable number of strategies for each of the cultural clusters identified.

Objective of the study

The objective of the study is to identify a pragmatic number of cultural clusters comprising of the different nations of the world. However such categorization or classification needs certain dimensions of culture which are numerically calibrated so as to constitute the basis of such categorization or classification. The objective of this paper i.e. to identify the cultural clusters of the nations of the world has been attempted to be achieved on the basis of the dimensions of national cultures as identified by Trompenaars & Hampden-Turner.

Literature Review

Literature survey for the study has been done with two objectives. The first objective is to delve into the concept and implication of culture at national and organizational levels as viewed by different scholars and authors & to study the interrelations among the two levels. The second objective of the study is to gain knowledge on the dimensions of national culture as identified by Geert Hofstede. The findings of the literature survey has been referred to at appropriate places in the following discussions.

Culture is variously defined in terms of several common processes i.e. thinking, feeling, reacting, recognizing identities, environmental constructs, using technology, and commonly experienced events including the history, language, and religion of their members of a group

which distinguishes that group with other groups. Culture is concerned with the development of coherent viewpoints which bring a cumulative effect to otherwise isolated experiences of a group, making them feel special yet allowing others to have a parallel experience (Veltman 1998). Culture is relevant for the development of socio-technical systems (Kummer & Leimeister 2012). Culture is a group-level construct. Professions, organizations, societies and nations are among the groups that could be considered to have their own cultures. Hence National Culture, for the purpose of the study, is construed to be common behaviors, beliefs, values and attitudes shared by citizens of a nation. A national culture is the whole body of efforts made by a people in the sphere of thought to describe, justify, and praise the action through which that people has created itself and keeps itself in existence (Fanon 2003).

National and regional culture and cultural variations decisions regarding the choice of location and foreign entry modes deployed in international business management (Reis et al 2011; Kogut & Singh 1988). Importance of cultural issues is becoming increasingly evident in many applied disciplines including information technology (Ali & Brooks, Myers & Tan 2002). Management of international science projects is also affected by National culture (Shore & Cross 2005). National culture impacts the e-governance readiness of nations (Kovacic 2005). Failures of some International Joint Ventures can be attributed to incompatibility of national cultures of the parties involved (Avny et al). Cultural model of comparative industrial relations theory explains the cross-national pattern of industrial relations institutions and any change thereof (Black). There are empirical evidences of increased utility of national culture as a state legitimation strategy in response to economic protectionist capacity changes resulting from global political economic integration (Blad 2008). Differences in national cultures are important for domestic companies which consider international expansion (Bayias & Assimakopoulos 2011). National cultures affect organisational forms and structures as well as group support systems (Davison, Gibson 1994). National culture affects the composition and leadership structure of board of directors of corporate organizations (Li & Harrison 2008). National cultures and diversity of management perceptions are correlated (Guidroz et al 2005). Origin of corporate behaviour and the mechanisms that can help promote organizational effectiveness are affected by national cultures as evidenced by empirically in Germany, Austria, Slovenia & Denmark (Gulev 2009). It has also been observed that employees may be resisting a company's corporate culture if it is in contrast with their respective national cultures (Katz 2005). National culture

is an important determinant of business negotiation process (Sebenius 2009). Corruption, a burning problem in business management is linked with, along other factors inter alia, national culture (Rethi 2012). Configuration of national financial systems are affected by national culture (Tadesse & Kwok 2005). Scholars have cited instances of impact of national culture on knowledge sharing activities in global virtual collaboration (Smith & Dugan 1996). National culture also impacts economic ideology on managerial work values (Ralston et al 1995) Scholars argue that management practice must fit the national culture (Erez 2000). National culture thus has a pervasive effect on organizational and managerial aspects (Santos 2012).

The various researches of Geert Hofstede (2003, 2010) and Alfons Trompenaars & Charles Hampden (2012) have been found globally in order to get a broad view of the culture. Hofstede's taxonomy is the most cited in the literature on national culture and his taxonomy has strong linkages to several streams of research (Reis et al 2011). As such this paper focuses on the initial four dimensions of national culture as identified by Hofstede (1983) i.e. Power Distance, Individualism, Masculinity versus Femininity and Uncertainty Avoidance. Though he extended the number of dimensions of national culture to six (<http://www.geert-hofstede.com>) with introduction of two new dimensions of Long-Term Orientation in 1991 based on research by Michael Bond and Indulgence versus Restraint in 2010 based on analysis by Michael Minkov. The last two dimensions have not been considered in this paper as the scores of all the nations for those two dimensions could not be obtained.

According to Trompenaars, culture is a way a group of people act to solve problems. From three basics which are the relationship with others, time and environment, Trompenaars identifies seven fundamental dimensions of culture. His definition of culture is a mix between organizational and national cultures. He proceeded by using a database which contained more than 30000 survey results so that he could analyze the seven dimensions of culture.

Universalism Vs Particularism (UP): In universalistic cultures, people share the belief that general rules, codes, values and standards are much more important than needs, claims and relations. On the contrary, in a particularistic culture, people think that human relationships are more important than rules and codes. Human aspects gets the priority over rules.

Individualism Vs Collectivism/ Communitarianism(ICC): In individualistic cultures, people place the community after the individual, which is exactly the opposite in a communitarian culture. People are autonomous in the first case, they can take decisions, they can take care of them and their family on their own. In the second case, people are responsible for the good functioning of the society and are the representation of the health of a society considering his degree of involvement in the development of the society.

Neutral Vs Affective Relationships (NA): People in an affective culture can show up their emotions and their feelings. They do not have to hide them and people from this type of culture sometimes interpret less explicit signals from neutral cultures. People in a neutral culture think that it is not correct to show emotions and feelings even if they have it. It is the degree of manifesting it which is limited and controlled. They might interpret signals from an affective culture as excited and too emotional.

Specific Vs Diffuse Relationships (SD): People in specific cultures always start analyzing by small details, specific elements to finally put them together to have a global idea. They concentrate on facts, standards and contracts. They have a larger specific sphere than the private one which is very difficult to enter in. On the contrary, people in diffuse cultures start analyzing the whole and then the elements, but in a perspective of the whole because all elements are linked to each other. In fact, the elements matter less than the link between them. They have a large private sphere and a small public one.

Achievement Vs Ascription (AA): This cultural dimension is similar to the power distance dimension of Hofstede. In achievement cultures, people respect their colleagues basing their respect on anterior demonstration of knowledge and previous achievements. They do not look at the title of people's job. In ascription cultures, people use their titles of job and respect their hierarchical superior.

Time Orientation (TO): He shows that meanings of past, present and future depend on cultures. For instance, people who have a past-oriented culture respect older people and are quite traditional whereas people who have a future-oriented culture enjoy discussing potential and future achievement. There is a second division of cultures possible thanks to time orientation which compares sequential and synchronic cultures. This dimension looks like a distribution of tasks in the time in a culture. People who have a sequential culture tend to do

one activity at a time by following plans whereas people who have a synchronic culture can do many tasks and activities at a time by changing the subject at any time.

Human-Nature Relationship i.e. Internal Vs External Control (IC): This last dimension lays the stress on the fact that cultures think that they control their environment and others think that they are controlled by it. In an internalistic culture people believe that what happens to them is their own doing. Many Asian countries have an external culture in which the environment shapes their destiny. Externalistic people often adapt to external circumstances as they do not believe that they are in full control of their destinies.

Research Methodology

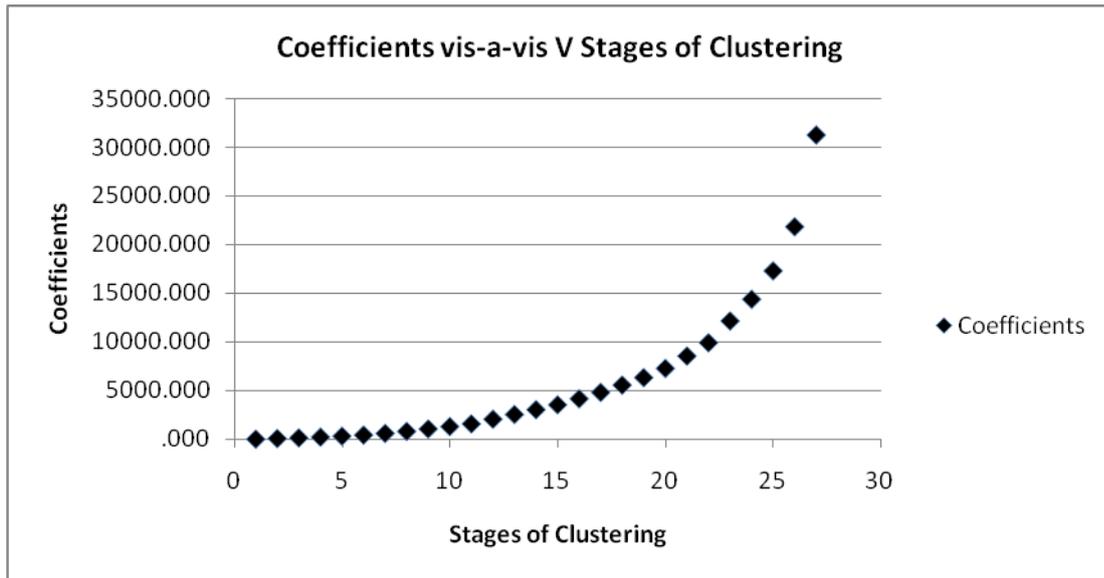
All the values of the seven dimensions i.e. UP, ICC, NA, SD, AA, TO and IC were available for only twenty eight countries. The values of six dimensions were on a scale of 0 – 100 with the only exception of TO. Hence the values of TO were rescaled on a scale of 0 – 100 to have uniformity of the scores.

Initially the Hierarchical Method of Cluster Analysis was applied. Squared Euclidean Distance was considered for the analysis. An agglomeration schedule was drawn up using the Ward's Method of Linkages to know the coefficients of the stages of clustering. As there were 28 countries, the number of stages of clustering were 28 – 1 i.e. 27.

The coefficients were plotted to get the Elbow Diagram to get an idea about the probable number of optimum clusters. Based on such idea, the K-Means Cluster Analysis were applied with a few choices of optimum number of clusters to get the number of cases in each cluster. That number was chosen to be the optimum number of clusters where the cases were distributed most evenly. On determining such optimum number of clusters, the cluster centers and distances between the cluster centers were calculated followed by ANOVA. Finally the nations constituting the clusters were identified.

Findings of the study

The coefficients were plotted against the numbers of stages of clustering to get the elbow diagram as given below.



The optimum number of clusters as reflected in the above Elbow Diagram is too high for practical purposes. Hence the K-Means Cluster Analysis Method is Applied with 2, 3, 4 and 5 number of clusters.

The number of nations in clusters for each of the four number of clusters, as obtained by the K-Means Cluster Analysis Method, is appended below.

Clusters	2 Clusters	3 Clusters	4 Clusters	5 Clusters
Cluster 1	9	19	17	5
Cluster 2	19	2	3	2
Cluster 3		7	7	1
Cluster 4			1	7
Cluster 5				13
TOTAL	28	28	28	28

The 4-Cluster and 5-Cluster classification were discarded as both of them showed a cluster constituted by one country. A 3-Cluster classification was also discarded as the number of countries in the three clusters showed wide variations. Thus the 2-Cluster classification was chosen to be the optimum categorization.

Hence this paper further analyzes the situation of a 2-Cluster classification.

The final Cluster Centers were as follows:

	Clusters	
	1	2
UP	67.03	53.78

ICC	58.23	44.31
NA	38.58	44.00
SD	83.53	59.44
AA	62.00	45.06
TO	4.65	04.46
IC	53.76	36.28

The distances between the final Cluster Centers were as follows:

Clusters	1	2
1	-	39.640
2	39.640	-

The results of ANOVA at 5% Level of Significance were as under:

	Cluster		Error		F-Statistic	p Value
	Mean Square	DF	Mean Square	DF		
UP	1072.034	1	98.477	26	10.886	0.003
ICC	1182.246	1	98.735	26	11.974	0.002
NA	179.476	1	205.486	26	0.873	0.359
SD	3541.755	1	89.345	26	39.642	0.000
AA	1753.447	1	222.374	26	7.885	0.009
TO	0.214	1	0.247	26	0.868	0.360
IC	1867.189	1	119.682	26	15.601	0.001

The F-test has been applied here for descriptive purposes only as the clusters have been chosen to maximize the differences among cases in different clusters. The observed levels of significance have not been corrected for this and hence it cannot be treated as test for hypotheses that the cluster means are equal.

Inference of the study

The study revealed that the optimum number of cultural clusters of the nations of the world is two. The constituents of the two clusters are given in the annexure.

Limitations of the Study

This study is subject to certain limitations. Firstly only twenty eight countries have been considered for which data was available for all the seven dimensions as identified by Trompenaars. Secondly, the study has been based on the findings of Trompenaars only. The other significant findings on the subject i.e. that by Hofstede has been kept outside the ambit

of this study. As culture is a learned aspect, the other factors affecting culture at national level have not been considered in the study.

Future scope of the study

There is future scope of future study on how the cultural aspects at a national level as identified by Hofstede and Trompenaars & Hampden-Turner match against each other. Studies may be undertaken to test the association of the constituents of national cultures and determinants of cultural aspects and various socio-economic variables at national and / or regional levels. Such studies shall help in achieving better understanding and interpretation of cultural environments in different countries and / or regions. International business management would be benefited from such studies as such studies would provide appropriate information not only to identify and solve cross-cultural problems but also to achieve synergistic effects by gelling compatible cultures to take better decisions in a multiplicity of cultural environments which international business management envisages.

Conclusion

International business management has to address different business environments in different parts of the world, of which cultural environment is a very important constituent. Culture is all-pervasive and tells upon almost all the functional aspects of cross-border business. Increasing globalization is compelling international business management to recognize, identify and address cross-cultural issues in management. Proper identification of the cultural clusters will enable global business organizations to design their business strategies aligned with the attributes of nearly homogeneous groups of different nations. Such culture-aligned business strategies would further help in optimum utilization of the organizational resources.

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Annexure

Cluster 1	Cluster 2
Australia	Bahrain
Belgium	China
Brazil	Egypt
Canada	India
Cuba	Indonesia
Czech Republic	Japan
Denmark	Nigeria
Finland	Philippines
France	Singapore
Germany	
Hungary	

Ireland	
Poland	
Russia	
Spain	
Sweden	
Switzerland	
United Kingdom	
United States of America	