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## RESEARCH ARTICLE

### STANDARDIZED ADVERTISEMENT STRATEGY FOR CONSUMER PRODUCTS IN EMERGING ECONOMIES: A TWO – STEP CLUSTERING METHOD

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#### ABSTRACT

Global competition of multinational firms illuminates the need of standardized consumer products and considers the benefits of standardized advertising in prospective economically similar countries. The role played by standardized advertising strategy in the structural adjustment between business and changing global scenario is dynamics for the ongoing growth and value creation of consumer products. The paper tests the prospect of implementation of standardized advertisement strategy for consumer products in economically similar countries with the identical appeals in emerging economies. Standardized advertisement in economically similar countries for consumer product of business practices is determined by Two-step clustering which is quite different from conventional clustering method to maximize the differences among cases in different clusters rather than focusing on the explanation for inconsistency in the categorization of items there by reducing groupings due to chance covariation. It is found that that a single distinctive advertising standardized strategy for firms followed can be the optimal solution of standardized global advertising in the determined countries for consumer products.

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#### INTRODUCTION

Speedy development in international business activities reflects global competition of multinational firms that can be experienced in the development of standardized global products and global advertising for consumers (Koku, 2005; Leslie, 1995). Multinational companies (MNCs) seem to assume the execution of identical marketing strategies through structural change with the changing dynamic as a means to cash in on business opportunities (Jain, 1989). Need for standardization of advertising for global standard system has stretched in the last few decades (Sassen, 1991). Intensified competition among competitors is attributed to the growth and the need for standardized advertisement (Craig and Douglas, 1997; Agrawal, 1995). The shift towards advertising standardization in the last decade is evident (Melewar and Vemmervik, 2004). Global advertising standardization is a relevant strategic marketing choice (Szymanski, Bharadwaj, and Varadarajan, 1993; Wind, 1986). Although striking the most favorable standardized marketing strategies requires integration of the diverse approach into one overall strategy (Leslie, 1995; Teece, 2010).

The objective of the paper is to determine the standardized advertisement strategy for consumer product in economically similar countries with the same appeals. The paper consists of two phase studies (1) investigate in clustering of countries with market homogeneity by two-step clustering and (2) how economic similarity amongst countries open the prospect of implementation of standardized advertising for consumer products in the clustered countries. This study is exploratory and the sample in use does not lead to generalization of premise from the result. The demand for similar product is on the rise throughout the world (Alden, Steenkamp; and Batra, 2006). Consumer looking for both quality and affordable branded product is quite a natural (Vakratsas and Ambler, 1999). The ability to produce value and convey the message through standardized advertising is favorable for any firm (Mirjaliisa, 2007; Walters, 1986). Standardized advertising are significant for any accomplishment of firm in a competitive economy most of the literature on past study in marketing reveals the emphasis by several researcher on the notion of standardized advertising in business operation (Akgüna and Halit, 2014; Melewar and Vemmervik, 2004). The worldwide spending on advertising is comprehensive (Agrawal 1995). There is an increasing need for the better understanding of the advertising standardization approach for long (Street and Jackson, 1990; Schuster and Copeland, 1999). The importance

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of advertising standardization can be highlighted from the fact that the growth of national economy depends a lot on advertising promoting sales for its sustenance (Steenkamp, Batra and Alden, 2003; Daniels, 1987; Zou and Cavusgil, 2002; Jain, 1989). The growths of advertising have been remarkable with steep competition for a slice in the big pie of advertising (Kim and Lim, 1988). The sustenance of this will remain the case; perhaps the growth has been the distinctive features of the global economy of this century (Steenkamp and Ter Hofstede, 2002; Wind, 1986). Concentration of revenue, both in products and companies were confined to the developed countries only, things are rapidly changing (White and Griffith, 1997). Companies are seen to be deploying more aggressive standardized advertising campaigns especially in those countries which are economically alike countries with the intent of saving (Jain, 1989); the reason for it is closely fought competition. Recent growth in advertising is propelled by television advertising which also means they rely for their revenue on advertising (Severn, Blech, and Belch, 1990; Chih, 2011; Barney, 1991). Marketing behavior is not static identification and implementation of the correct standardized approach oriented towards advertising standardization for multinational companies can be a game changer (Wang and Yang 2011; Sorenson and Wiechmann, 1975; Brandt and Hulbert, 1977).

Globalization has brought the world into one marketplace (Douglas and Wind, 1987). Scientific and technological innovation has been the driving force (Samiee and Roth, 1992). Many firms had to change and raise their overseas operations to global standard because of market saturation in industrialized economies (Jeon and Beatty, 2002). The concepts of globalization have received a good deal of research investigation (Collis, 1991; Buzzell, 1968; Aydin and Terpstra, 1981; Levitt 1983). Standardization in areas of marketing strategy relating to product including brand names, physical evidence and packaging is evident (Birnik and Bowman, 2007; Ries and Trout, 1986). There is growing evidence that marketing strategy relating to advertising standardization in industrialized countries is on the rise because of homogenization of needs and wants of people across nations (Ozsomer and Simonin, 2004). The notions of standardized advertising strategies along with segmented markets increases the prospect of profitability two fold while operating internationally (Banerjee, 1994; Sassen, 1991). Advertising with truly universal appeal can be successful in any markets while there have been a steadily shifted from the subject matter of the impracticability of standardized advertisement in recent times which are basically attributed because of the advancement and improved communication (Fatt 1967); Factors like economy, demography, culture, the political and legal system (Okazaki, 2004) have profound impact while devising for any advertisement strategy and vary greatly from country to country that can be a barrier in the effective implementation of standardized advertising (Koslow, Shamdasani, and Touchstone, 1994; Chrisman, Hofer and Boulton, 1988).

In order to facilitate an integrated world new ideas are needed (Van Raaij, 1997). Numerous cross-national studies of international advertising have been undertaken in an attempt to addressing the apprehension either explicitly or implicitly (Krugman, 1972); with reference to economically advanced countries, especially Western and European countries

(Papavassiliou and Stathakopoulos, 1997). In the era of globalization it is presumed that that standardized advertisement is feasible and the reason for it, the increasing similarity in marketing condition, new product information, need and wants of the consumers of these countries intensified by the frequent mobility of the consumers especially in economic similar nations (Eunju, Charles, Heewon, Jooyeon, Udo, David, and Fanghua, 2012). The United States, Western Europe, China, Japan and India, make up for the major world producer and appear comparatively homogeneous in terms of economic conditions and marketing situation and consequently increasing the prospect of accomplishing the intent standardized advertising strategy; although dissimilarities still persists in terms of ethnicity lean amongst many countries (John, Steven, Tamara, and Leslie, 2002; Doley and Sharma, 2016; Okazaki, 2004). However, researchers have documented ways in which people around the world are becoming similar in terms of education and affluent; their tastes and preferences are converging more so stimulated by the marketing environment in countries of similar regions (Boddewyn, 1991; Peebles, Ryans, and Vernon, 1978; McAlister, Srinivasan, and Kim, 2007).

## MATERIALS AND METHODS

Increased competition among firm can be attributed to advertising standardization by MNCs industry. 1990s saw many corporations facing declining profits and reevaluate their strategy which was strategies was a natural strategic decision in order to align with the changing circumstance (Johansson and Yip, 1994; Jaworski, and Kohli, 1993). The prevailing market condition faced with the increased transaction amongst nations with open boarder and free trade agreement and countries aligning themselves to Associations (Laroche, Pons, and Zhou, 2001). The measurement instruments used for the study determinants are confirmed. The study is exploratory in nature that aims to achieve homogeneity of countries to address the specific characteristics of the particular group of interest that has been subsequently examined in detail. Here, we have focused on the research aim by examining the trend of the variables more carefully. For cluster analysis the variables selected for the hypothesis is significant to standardization approach; it helped in identifying the most similar objects and grouping them (O'Brien, 1992; Brown and Forsythe, 1974). One of the most important decisions to decide was the selection number of cluster. Since there is no specific rule to decide the number of cluster, the numbers of cluster depend upon resource available. Two-step cluster analysis method is used, for it accommodate the categorical and continuous data for the selected countries; to look into the strategic advertising standardization practice deployed by MNCs in economically similar countries (Keegan, 1969). During the study, we have also used quota and purposive sampling method for qualitative studies based on specific purposes associated with this research study's questions. To glean knowledge from individuals that has particular expertise, expert sampling were used. This expertise was necessary during the exploratory phase. The marketing managers in advertising sector were interviewed as key informant to avoid response bias since the managers are responsible for the marketing operation for more reliable information. Identified sample size includes 90 countries that are selected randomly for the study from across the world. Exploration of literature in the field of advertising standardization with economic similarities in targeted market

helped us classify and simplify the decisions on list of items that are require for the study. Data includes time period of ten year that are considered for the study. Standardization of the variables selected set forth by the algorithm. Pre-clustering was done for measuring the log-likelihood distance of these countries. The pre-cluster step uses a sequential clustering approach to scans the data recorded on one to one basis and decides for if there is any need for the current record merger with the preceding formed clusters or starts a new cluster based on the distance criterion. The log-likelihood distance is calculated by using the algorithm.

$$d(i, n) = \xi_i + \xi_n - \xi_{<i, n>}$$

Where;  $d(i, n)$  is the distance between clusters  $i$  and  $n$ ;  $<i, n>$  index that represents the cluster formed by combining clusters  $i$  and  $j$  (Daniel, 2010)

To determine the number of cluster we have used AIC (Akaike's Information Criterion) to calculate each number of clusters from the specified range, this was done as an indicator to find an initial estimation for the number of clusters from the large data set. The variable items incorporated for the study includes Purchasing power parity (PPP), Gross Domestic Product (GDP), TV coverage and Education, forms the core of the clustered countries. Preliminary activities on existing studies on the subject and informal investigation on the prevailing trend were carried out to narrow the scope of the study. Exploration helped in identifying accurately the data needed for the study. This preliminary finding alleviated our budgetary constraint. The measurement instruments used for the study determinants are confirmed. We have also used one-way analysis of variance (ANOVA) for testing the hypothesis; which is a frequently used statistical tool in many areas of Management science, especially the marketing science theory. Although the difficulty of inherent heteroscedasticity in its application aroused because of variances difference among groups of clustered countries has been addressed henceforth. The variance of the error terms differ across observations. Given that heteroscedasticity is common in cross-sectional data, methods that correct heteroscedasticity are essential for prudent data analysis. Levene test was conducted and it was confirmed we have heteroscedasticity error complexity and homoscedasticity is arrived at after conducting further thorough test for clustered countries in relation to number of standardized advertisement for consumer product.

The assumptions of the linear regression model are also considered, ordinary least squares (OLS) provide efficient and unbiased estimates of the parameters. Since the variance of the errors varies across observations with the OLS estimator remains unbiased, but becomes inefficient; the usual procedures for hypothesis testing are no longer considered so we are conducting robust analysis as an appropriate method. Using standard notation, the linear regression model

$$Y = X\beta + \varepsilon$$

Where  $E(\varepsilon) = 0$  and  $E(\varepsilon\varepsilon') = \Phi$ , a positive definite matrix is formed. Under this specification, the OLS estimator  $\beta = (X'X)^{-1}X'y$  is linear unbiased at:

$$Var(\hat{\beta}) = (X'X)^{-1}X'\Phi(X'X)^{-1}$$

To understand better we need some basic analysis of outliers and influential observations. Nominal scales are used for leveling the variables for the clustered countries sequentially according to the number of clusters. Analysis of Variance conducted for different product henceforth. We have listed categories of products that are suitable for standardization in the countries under study after segmentation of the products according to their characteristics by assigning 1 and 0. The aim was to test the central tendency (mean) of the proposition of consumer and high technological products suitability for standardization or not. We have also used Levene's test to test if  $k$  samples have equal variances. Variances across samples are of homogeneity since the samples from the populations under consideration are independent.

Using standard notation (One-Way ANOVA)

$t$  = number of treatments ( $t = k$  for one-way ANOVA;  $t = kl$  for two-way ANOVA)

$y_{ij}$  = sample observation  $j$  from treatment  $i$  ( $j = 1, 2, \dots, n_i$  and  $i = 1, 2, \dots, t$ )

$n_i$  = number of observations from treatment  $i$  (at least one  $n_i$  here is 6 clusters)

$N = n_1 + n_2 + \dots + n_t$  = total number of pieces of data (overall size of combined samples)

$\bar{y}_i$  = mean of sample data from treatment  $i$

$D_{ij} = (y_{ij} - \bar{y}_i)$  = absolute deviation of observation  $j$  from treatment  $i$  mean

$D_i$  = average of the  $n_i$  absolute deviations from treatment  $i$

$D$  = average of all  $N$  absolute deviations

$$F_{Levine} = \frac{\sum_{i=1}^t n_i (\bar{D}_i - \bar{D})^2}{(t-1)} \div \frac{\sum_{i=1}^t \sum_{j=1}^{n_i} (D_{ij} - \bar{D})^2}{(N-t)}$$

For the computation of the p-value, we have  $df_1 = t - 1$  and  $df_2 = N - t$ .

### ANALYSIS AND RESULTS

Although the lowest AIC coefficient is for seven clusters, for optimal number of clusters we have four clusters. The cluster distribution is shown in Table 1. The segmentation procedure is somewhat different, for the focus is on clustering the economically similar countries for standardized multinational advertising for consumer products. The distances of between two clusters are reduced by the clubbing of the countries into a single cluster with 95 % confidence level.

Table 1. Cluster Distribution of Countries

Cluster	N	% of Combined	% of Total
1	17	18.9%	18.9%
2	31	34.4%	34.4%
3	30	33.3%	33.3%
4	12	13.3%	13.3%
Combined	90	100.0%	100.0%
Total	90		100.0%

Table 1 have particular group of individual countries having similar characteristic to each other but forms individual cluster set forth with the parameter determined prior. The clustered countries can be clubbed in locus with geographically because of their similar distinctiveness. Regional growth depends on spending of the advance countries need to help to develop their market environment. Improved lifestyle depends largely on factors like PPP, GDP, TV Coverage and Education Level since they are at par with their neighbor countries. Investment will help bolster the economies of these mostly developing countries and for that a single standardized approached can be followed to solve the difficulty. Standardized multinational advertising for consumer products depend on international trade and investment in any of these countries (John and Marta, 2013; Gunthern and Andrea, 1998). The analysis successfully manages to create solution of four clusters or four different countries with similar economic market. The first type represents the advance countries 20.6 % with significantly higher revenues, earnings and stabile growth rate.

and underdeveloped market compared to the first type lower than the country's average of the developed countries. The clustered countries that have code of color representing each country. These are all manufacturing countries with steady growth. Cluster 2 includes 36 countries and an aggregate of 33.6% of the countries of similar economic conditions belongs to association of countries including African Nations and Asian countries and with similar economic countries and are geographically connected lies in the same region with close proximity (Sundaram and Black, 1992). The total combined GDP and GNP of these countries low. The third group representing smallest cluster of countries 18.7 % having slightly higher revenues and earnings with similar economic marketing and healthier condition than the second group, but the difference is that this group represents countries from all over the world with high revenue growth rate, representing developing countries with significant potential (Tai and Wong, 1998). The last group represents 23.4 % countries from the analyzed countries, having similar

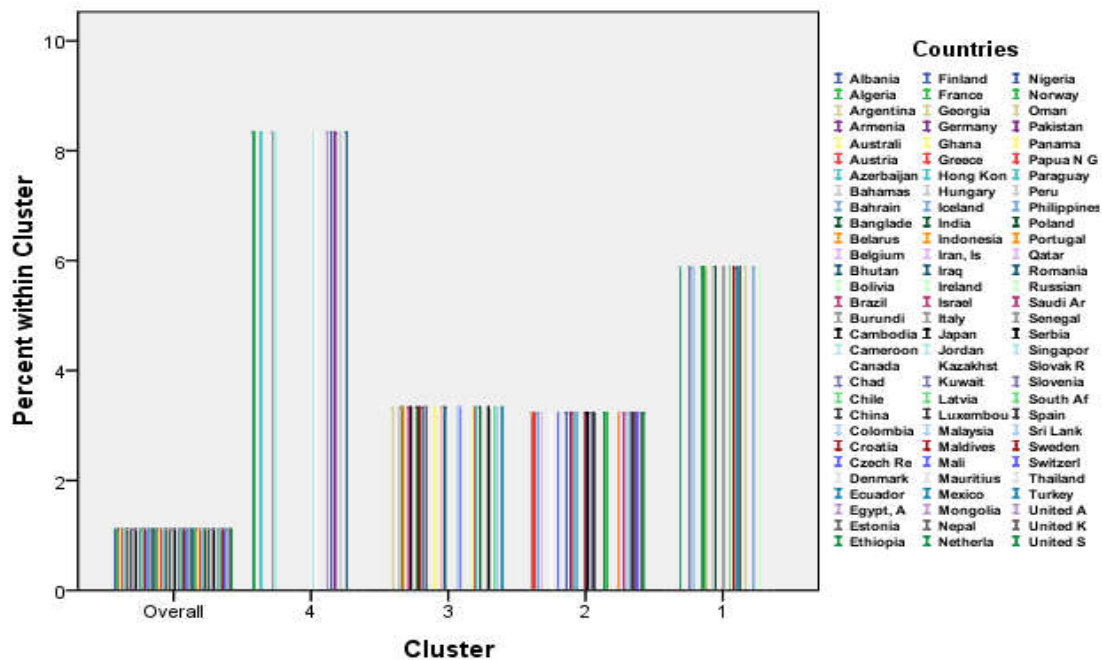


Figure 2. Schematic representation of Cluster Percentage of Countries

Table 2. Cluster centroids

Cluster	PPP		GDP		TV Coverage		Education Level	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
1	1.543	12.575	1.086	11.582	8.502	16.888	7.270	18.705
2	4.943	24.137	5.009	23.162	8.692	17.844	9.705	5.536
3	1.416	7.883	8.034	5.714	8.426	9.208	9.842	1.843
4	1.139	6.431	4.988	3.199	4.241	17.459	9.706	3.411
Combined	2.618	23.209	2.265	24.896	7.974	21.023	9.291	13.127

These countries are industrialist and have developed communications network, manufacturing, and provide significantly higher life style (Elinder, 1965). Cluster 1 includes those 22 countries included for the study; these countries are advance countries and are of similar economic distinctiveness mostly belonging to the Organization for Economic Co-operation and Development (OECD). OECD nations, although constitute small number of countries but they make up for much of the world economy in terms of the global GNP (Dess and Davis, 1984). The second cluster represents countries 33.6 % with relatively smaller revenues and earnings

economic condition with smallest revenues and earnings. Cluster 3 and 4, constitutes mixture of countries from all over the world and are characterized by underdeveloped with similar marketing and economic conditions. These findings are useful because mainly they provide the general structure of the economically similar clustered countries. For the potential foreign investors this analysis is an insight for standardized multinational advertising for consumer products in those countries (Andrey, Rajshekhar, Galina, and Michel, 2009). The centroids Table 2 represent descriptive statistics for the continuous variables.

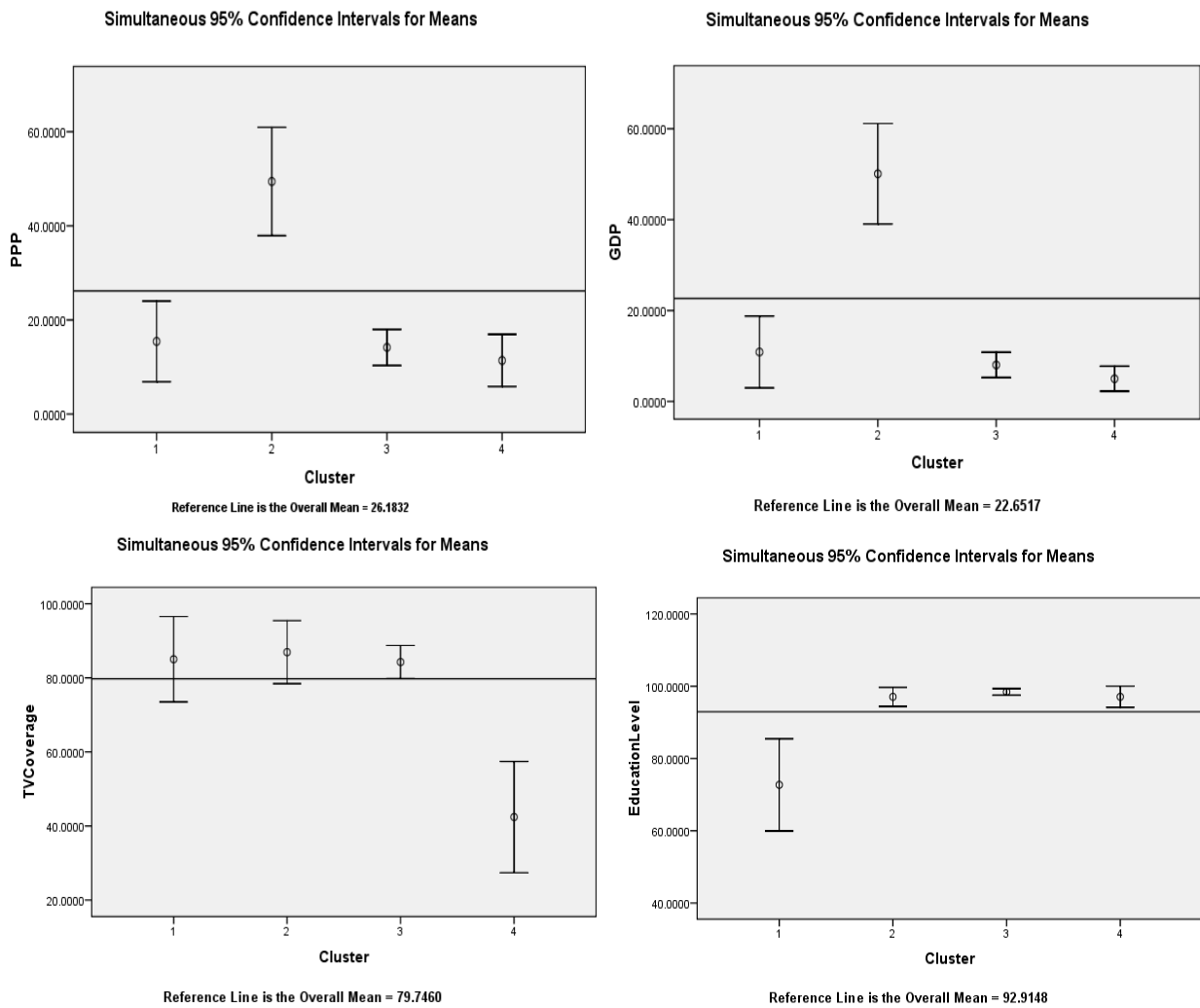


Figure 3. Within cluster variation for all continuous variables

The mean values for all continuous variables for each cluster countries are presented. We have six cluster groups with a continuous outcome measure. The samples from the populations under consideration are selected randomly and are independent having particular characteristic which includes 17 standardized consumer product; products include (e.g., Fruits, frozen, Cheese and curd, Milk and cream, condensed, Processed liquid milk, Footwear with uppers of leather, Luggage, handbags and similar articles of Leather, Tennis shoes, basketball shoes, gym shoes, training shoes and the like, Hats and other headgear, Belts and bandoliers, of leather or composition leather, Apparel of leather or of composition leather, Tobacco, manufactured (smoking tobacco, chewing tobacco, snuff), Cigarettes containing tobacco, Soft drinks, excluding water and fruit juices, Beer, Wine and grape, Coffee, decaffeinated or roasted, Chocolate and chocolate products) randomizing participants to one of four competing treatments).

We proceed with the assumption that the populations under consideration are approximately normally distributed. The outcome is standardized advertisement of product under study. The objective is to test whether there is a statistically significant difference in mean of standardized advertisement of product among the clustered groups of countries.

## Hypotheses

**H<sub>0</sub>:** There is no difference in mean of standardized advertisement of consumer goods for different clusters of countries.

**H<sub>1</sub>:** There is difference in mean of standardized advertisement of consumer goods for different clusters of countries.

Figure 5 shows error bar chart of the number of standardized consumer goods. The error bar shows the 95% confidence interval around the mean. The means indicate positive correlation among the clustered countries which standardize the advertisement of consumer product. They have about the similar spread as indicated by the length of the boxes. The boxes can be categorized into two cluster group of similar length of cluster 1, 3, 4 and cluster 2, 5, 6 with different mean. The population mean of sample are not significantly different to the standardized advertisement of consumer product in relation to the clustered countries and the error bar don't show any sign overlap. If we look at figure 6, the dispersion lean is relatively towards the mean and range of 10 to 15 on the Y-axis number of standardized goods; represent positive result about the presence of standardized advertisement for consumer goods in almost all the clustered countries. The mean plot of cluster 1, 5, 6 are approximately in the same dispersion line. Likewise cluster 2, 3, 4 falls in the same approximately in the same dispersion line. In order to have detailed analyses we

Two step cluster analysis: Clusterwise importance of Countries

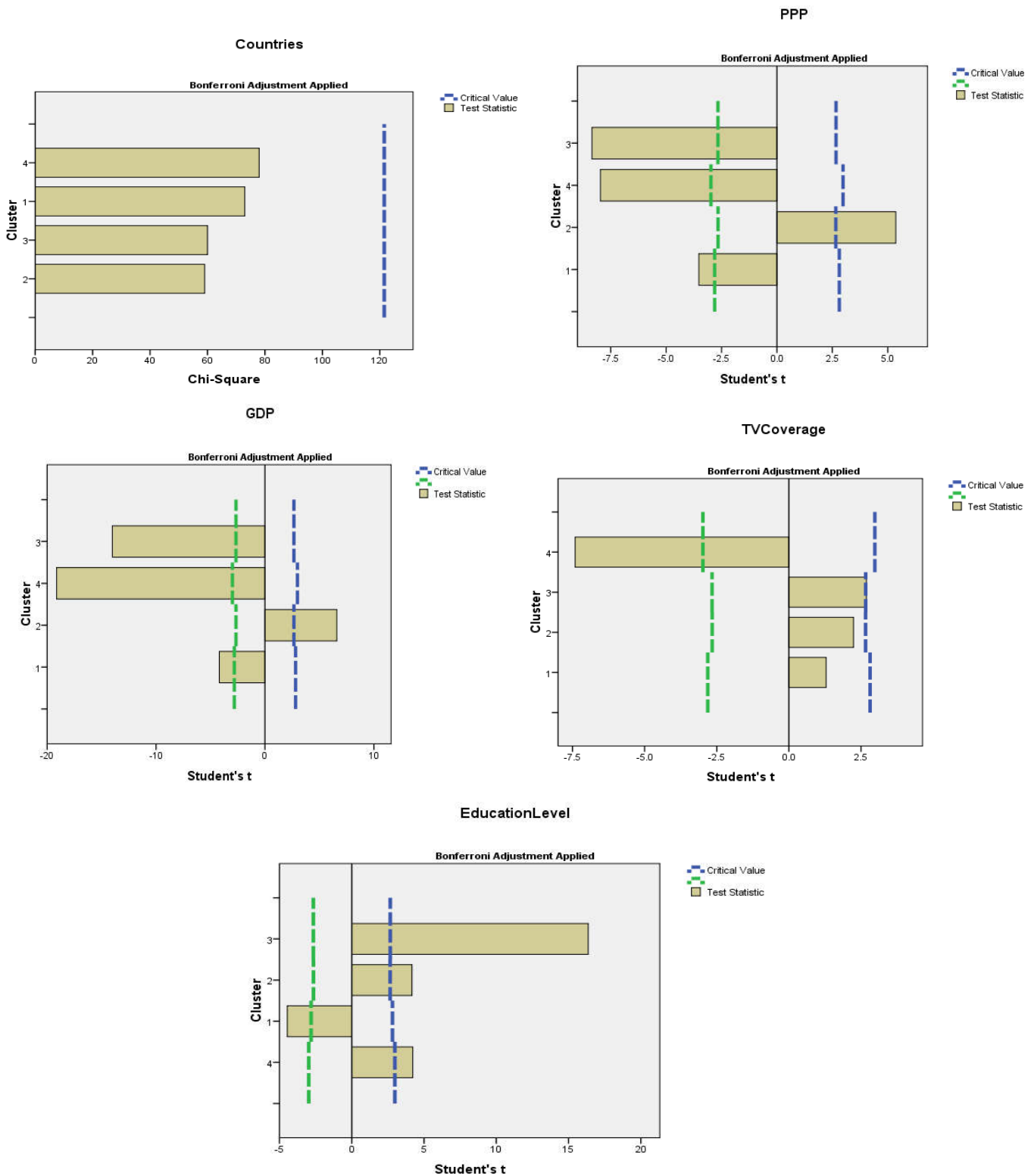


Figure 4. Clusterwise importance

have used the range tests, pairwise comparisons, contrast features in One-Way ANOVA. The descriptive statistic confirms what the mean graph shows. The standard deviation and standard error statistics confirm that are almost equally distributed except in cluster one with standard deviation of 3.76266 and cluster six with standard deviation of 0.95743. The table also provides us the confidence intervals upon which the error bars are based which are consistent.

The Levene statistic rejects the null hypothesis that the group variances are equal. Variance for the data are relatively dissimilar (hence we have less probability value). This also means that there is no homogeneity of variance (since the observed p-value is 0.003 is less than 0.05). Looking at the variance ratio for the smallest variance ( $0.957^2 = 0.916$ ) is for cluster six and the largest cluster four ( $6.054^2 = 36.6593$ ). The ratio of these values is  $36.659/0.916 = 39.991$ .

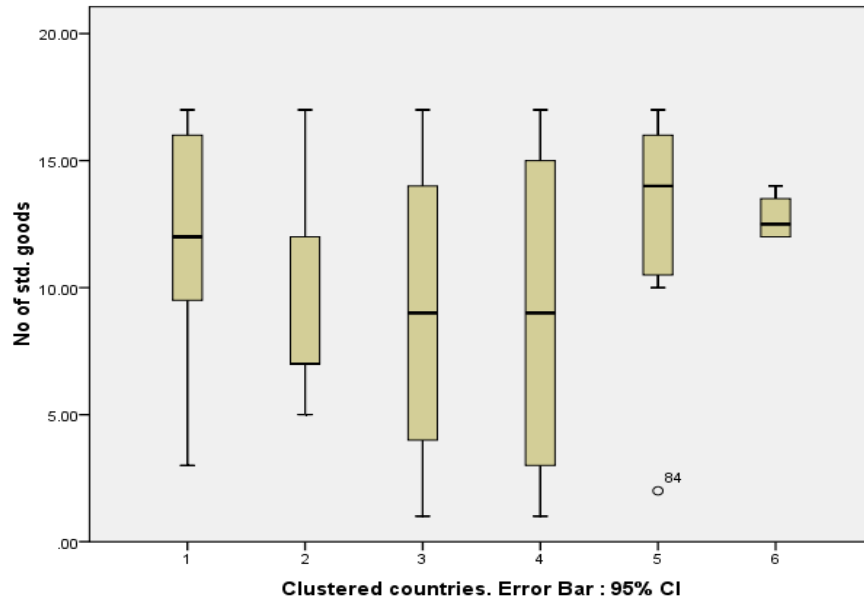


Figure 5. An Error Bar Chart

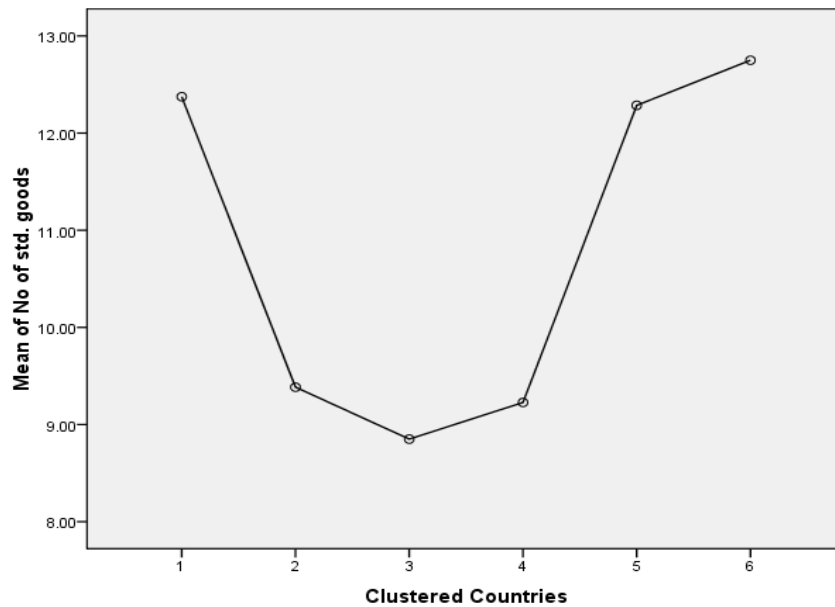


Figure 6. Means

Descriptive

Table 3. Descriptive

No of std. goods		95% Confidence Interval for Mean						
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
1	24	12.375	3.7626	.7680	10.786	13.963	3.00	17.00
2	13	9.384	4.2335	1.1741	6.826	11.942	5.00	17.00
3	20	8.850	5.5561	1.2424	6.249	11.450	1.00	17.00
4	22	9.227	6.0547	1.2908	6.542	11.911	1.00	17.00
5	7	12.285	5.2508	1.9846	7.429	17.141	2.00	17.00
6	4	12.750	.9574	.4787	11.226	14.273	12.00	14.00
Total	90	10.4000	5.08092	.53558	9.3358	11.4642	1.00	17.00

The difference is quite substantial therefore; we assume those variances are not homogeneous. ANOVA is robust to this violation when the groups are of equal or near equal size. The Levene test confirms the suspicion that the variances of the groups are different.

In order to overcome this heterogeneity difficulty we are conducting the ANOVA test we have selected two procedures (Brown-Frosythe and Welch) this was done so that we can get accurate calculation of homogeneity of variance. We choose to inspect the *F-value* and the method of post hoc test which does not rely on the assumption of equality of variance (Tamhane's T2).

## Levene's Test

Table 4. Homogeneity of Variances

No of std. goods			
Levene Statistic	df1	df2	Sig.
3.877	5	84	.003

## ANOVA Test

Table 5. ANOVA

No of std. goods (0-90)					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	232.306	5	46.461	1.890	.105
Within Groups	2065.294	84	24.587		
Total	2297.600	89			

## Robust test

Table 6. Robust Tests of Equality of Means

No of std. goods				
	Statistic <sup>a</sup>	df1	df2	Sig.
Welch	3.362	5	28.188	.09
Brown-Forsythe	2.240	5	54.023	.06

a. Asymptotically F distributed.

## Post Hoc Tests

Table 7. Contrast Coefficients

Clustered countries						
	1	2	3	4	5	6
1	1	0	0	0	-.4	-.6
2	0	.4	.6	-.1	0	0

Table 8. Contrast Tests

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
No of std. goods	Assume equal variances	1	-.1893	1.949	-.097	84	.923
		2	8.141 <sup>a</sup>	.869	9.361	84	.000
	Does not assume equal variances	1	-.189	1.141	-.166	20.299	.870
		2	8.141 <sup>a</sup>	.890	9.143	30.942	.000

a. The sum of the contrast coefficients is not zero.

The table is divided into between group effect (effect due to the experiment) and within group effects (unsystematic variation in data). The between group is the overall experiment effect (standardized advertisement for consumer product in the clustered countries). The sum of square for the model ( $SS_M = 232.306$ ) represent the total experiment effect and the mean squares for the model represent the average experiment effect on standardized advertisement of product. The degree of for the Standardized advertisement of the model ( $df_m = 5$ ) and the degree of freedom for the clustered countries of the model ( $df_m = 84$ ). There is positive significance of standardized advertisement of products among the clustered countries. The row label within group gives us the unsystematic variation within the data which is because of the standardized advertised product availability in the clustered countries. The tests of group means are same is represented by the *F-ratio* for the combined between-group effect. The value of the ratio is 1.890 is the likelihood of occurrence if there are no difference in means. The probability value is 0.105 since the observed significance value is more than 0.05 ( $0.05 < 0.105$ ) significance therefore we can say that there is positive significance of standardized advertisement of consumer product in the clustered countries.

## Planned Comparisons test

To find out the difference between where the group lie we carried out comparison test: the first one was done through clustering and secondly post hoc test for which all group are compared. Post hoc results are valid to the extent that the standard *F statistic* is robust to violations of assumptions. Since Levene's test was not significant, the assumption of equal variance does hold good. The *F statistic* holds good to unequal variances when sample sizes are equal or nearly equal but in this case we have the questionability of homogeneity. If we look into the Brown-Frosythe and Welch *F-ratio*, the test statistics are not significant. The Brown-Forsythe test statistic 0.063 is above significance level 0.05. The standard *F-statistic*, the Welch statistic is 0.09 significant is above 0.05. Although Welch statistic is more powerful than the standard *F* or Brown-Forsythe statistics when we have sample sizes and variances are unequal,  $F(d = 5, 54.023) = 2.240, p = 0.06$ . Welch *F-ratio* reports that standardized advertisements of product have significance positive relation in clustered countries  $F(5, 28.188) = 3.362, p = 0.09$ . In general, *F statistics* establish that there is or no differences between groups mean, and mean plots suggest where the difference



may lie. The aim was to use the One-Way ANOVA procedure to specify exactly how the means differ and test those specifications. The two groups are between number of standardized advertisement product and clustered countries.

under 1, 5 and 6 have statistically equivalent assessment scores. The mean of standardized advertisement of product across six cluster  $F(1, 84) = 2.49, p = 0.923$ . Planned contrast reveals a significance difference in number of standardized

**Table 9. Multiple Comparisons**

No of std. goods		Tamhane		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
(I) Clustered countries	(J) Clustered countries		Lower Bound				Upper Bound	
1	2		2.990	1.403	.493	-1.604	7.585	
	3		3.525	1.460	.280	-1.090	8.140	
	4		3.147	1.502	.487	-1.575	7.870	
	5		.089	2.128	1.000	-8.694	8.873	
	6		-.375	.905	1.000	-3.369	2.619	
2	1		-2.990	1.403	.493	-7.585	1.604	
	3		.534	1.709	1.000	-4.899	5.968	
	4		.1573	1.745	1.000	-5.362	5.677	
	5		-2.901	2.305	.982	-11.618	5.816	
	6		-3.365	1.268	.242	-7.784	1.053	
3	1		-3.525	1.460	.280	-8.140	1.090	
	2		-.534	1.709	1.000	-5.968	4.899	
	4		-.377	1.791	1.000	-5.954	5.200	
	5		-3.435	2.341	.939	-12.115	5.244	
	6		-3.900	1.331	.110	-8.268	.468	
4	1		-3.147	1.502	.487	-7.870	1.575	
	2		-.157	1.745	1.000	-5.677	5.362	
	3		.377	1.791	1.000	-5.200	5.954	
	5		-3.058	2.367	.977	-11.743	5.626	
	6		-3.522	1.376	.230	-7.995	.949	
5	1		-.089	2.128	1.000	-8.873	8.694	
	2		2.901	2.305	.982	-5.816	11.618	
	3		3.435	2.341	.939	-5.244	12.115	
	4		3.058	2.367	.977	-5.626	11.743	
	6		-.464	2.041	1.000	-9.511	8.582	
6	1		.375	.905	1.000	-2.619	3.369	
	2		3.365	1.268	.242	-1.053	7.784	
	3		3.900	1.331	.110	-.468	8.268	
	4		3.522	1.376	.230	-.949	7.995	
	5		.464	2.041	1.000	-8.582	9.511	

\*The mean difference is significant at the 0.05 level

In order to check that if proper weights given we construct the contrast-coefficient table for the groups. The table 8 tells us the value of the contrast itself; the associated t-test and the two tailed significance value. We can say that there is no significance difference in clustered countries for standardized advertisement of product,  $t(20.299) = -0.166, p = 0.870$ . Contrasts 2 tells us that there is significance difference in clustered countries for standardized advertisement of product,  $t(30.942) = 9.143, p = 0.000$ . The mean assessments of the three groups; number of standardized good for cluster 1 are 1, cluster 5 is -4, and cluster 6 is -6. We expect the observed difference in the mean assessment for these groups to be near 0. By specifying -1 and 1 as the contrast coefficients for these groups, the first contrast tests whether the observed difference is statistically significant. Similarly, the mean assessments of cluster of groups are equal, with the expected sum of the three groups to be equal to the sum of the other three groups, and the difference of these sums to be near 0.

The table shows the result of Tamhane's T2. The results are displayed in two panels: the first assumes that the variances of the groups are equal, and the second assumes that they are unequal. We focus on the first panel, the variances of the groups are assumed equal. The significance values for the tests of the first contrast are both larger than 0.10. This indicates cluster 1 are 1, cluster 5 is -4, and cluster 6 is -6 groups (0.923) is not significantly favorable toward standardization of product advertisement. Similarly, the significance values for the tests of the second contrast are less than 0.10. Cluster members

advertisement of product in the clustered countries,  $t(20.299) = -0.166, p = 0.870$ . We have carried out post hoc tests to compare all clustered group with each other. The table shows the result of Tamhane's T2 test where each of the clustered group are compared with all the remaining groups. For each pair of groups the difference between groups means are displayed, the standard error of that difference, the significance level of that difference and a 95% confidence interval. Post hoc tests are divided into two sets: one which assumes groups with equal variances and the other that does not assume that the variances are equal. The table reveals that there is consistency among group. The testy reveals high significance (0.05) difference among the group is very minimal. The sum of the entire group individual cluster reveals homogeneity with the same range- for cluster 1 (3.26), cluster 2 (3.71), cluster 3 (3.32), cluster 4 (3.69), cluster 5 (4.89) and cluster 6 (2.58). Except for cluster 5 and 6 the difference with (sig. is greater than 0.05)  $p = 1.00, d = 2.31$  still there is no significant difference between the group.

## DISCUSSION AND IMPLICATIONS

Although, the prospective worth for standardized advertising in worldwide market approach maintains significant advantage of cost savings and functionality (Jain, 1989). The study materialize to agree with the idea that international advertising can be standardized in economic similar countries worldwide because there are several products which satisfies universal common needs (Harvey, Lusch, and Cavarkapa, 1996).

Disparities in the attribute of the clustered countries in terms of economic differ from countries to countries and the variables vary in accordance a consistent pattern between the economically similar countries (Duncan, and Ramaprasad, 1995; Griffith, Hu, and Ryans Jr, 2000; Henzler and Wilhelm, 1986). In relation to the sample of the clustered countries it places greater stress on the variables than the countries attributes because it is more concerned with variables than the countries as sample (Deshpande' and Zaltman, 1982). These findings suggest that standardized advertising messages will hold the same appeals when employed in the economically similar clustered countries if the advertiser is concerned with standardized communication (Hu and Griffith, 1997, Daniels, 1987). Since the essential product may serve essentially the same need in each of the clustered country. Several factors influence the distinctiveness of the product that people emphasize in its purchase (McAlister, Srinivasan, and Kim, 2007). For an instance, a relatively low level of per capita income countries, education level and awareness the emphasis could be on the operational traits of the product and durability, while countries with high level of income emphasis upon the more hidden aspects of the product (Griffith, Chandra, and Ryans Jr, 2003; Solberg, 2000). In countries where the level of ethic comes into question, advertising may have to mention the transparency of the product. The findings show that this threat is inherent for any business operations and even for products which serve as a standard for any companies. The decision taker should be responsive to people taking into account their purchasing ability and should recognize the statements people around the world are becoming increasingly similar with the prospect of implementing standardized advertisement in economically similar countries markets.

### Limitations

This study was exploratory in nature and presented the results based on analysis of available data of the selected countries, while the linkage of standardized advertisement of product of MNCs and economic similarity among nations is dynamic. The sample consisted of relatively based on the influential variable factors that exert influence on the economy of a country. It is tentative whether or not the findings of this study are relevant to the implementation of standardized advertising strategy. Furthermore, only four variable factors are incorporated for the subjects of this study. It is true that standardized products can be more globally marketed than based on standardized advertising. Therefore, the findings of this study are limited to economically similar clustered countries overgeneralization of the findings should not be made although it does equate common ground for standardization. It will be interesting to examine the impact of implementation of the standardized advertising strategies by the firms.

### REFERENCES

- Agrawal, M. 1995. *Review of a 40-year debate in international advertising: practitioner and academician perspectives to the standardization/adaptation issue. International Market Review*, 12, 26–48.
- Akgüna, A.E., Halit, Keskinb,H. 2014. Standardization and Adaptation of International Marketing Mix Activities: A Case Study. *Procedia - Social and Behavioral Sciences*. 150, 609 – 618.
- Alden, D. L., Steenkamp, J. -B. E. M., and Batra, R. 2006. Consumer attitudes toward marketplace globalization: Structure, antecedents, and consequences. *International*
- Andrey, M., Rajshekhar, G.J., Galina, M., and Michel, L. 2009. *Cross-cultural advertising communication: Visual imagery, brand familiarity, and brand recall. Journal of Business Research*, 62,931–938.
- Aydin, N., and Terpstra, V. 1981. Marketing know-how transfers by multinationals: A case study in Turkey. *Journal of International Business Studies*, 12, 35– 49.
- Banerjee, A. 1994. Global Campaigns Don't Work; Multinationals Do. *Advertising Age*, 65, 23.
- Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99–120.
- Birnik, A., and Bowman, C. 2007. *Marketing mix standardization in multinational corporations: A review of the evidence. International Journal of Management Reviews*. 9, 303–324.
- Boddewyn, J. J. 1991. *Controlling sex and decency in advertising around the world. Journal of Advertising*. 20, 25–35.
- Brandt, W. K., and Hulbert, J. M. 1977. Headquarters guidance in marketing strategy in the multinational subsidiary. *Columbia Journal of World Business*, 12, 7 – 13.
- Brown, M. B., and A. B. Forsythe. 1974. Robust tests for the equality of variances. *Journal of the American Statistical Association*, 69, 364-367.
- Buzzell, R. 1968. Can You Standardize Multinational Marketing?. *Harvard Business Review*, 46, 102-13.
- Chih, W.W. 2011. *Global marketing strategy modeling of high tech products. Journal of Business Research*, 64, 1229–1233.
- Chrisman, J. J., Hofer, C. W., and Boulton, W. R. (1988). Toward a system for classifying business strategies. *Academy of Management Review*, 13, 413-428.
- Collis, D. J. 1991. A resource based analysis of global competition. *Strategic Management Journal*, 12(1), 49– 68.
- Craig, C. S., and Douglas, S. P. 1997. Managing the transnational value chain: Strategies for firms from emerging markets. *Journal of International Marketing*, 5, 71-84.
- Daniel, S. 2010. Applying TwoStep Cluster Analysis for Identifying Bank Customers' Profile. *Buletinul Universitatii Petrol- Gaze din Ploiesti*, 3, 66-75.
- Daniels, J. D. (1987). Bridging national and global marketing strategies through regional operations. *International Marketing Review*, 4, 29– 44.
- Deshpande', R., and Zaltman, G. 1982. Factors affecting the use of market research information: A path analysis. *Journal of Marketing Research*, 19, 14– 31.
- Dess, G., and Davis, P. S. 1984. Porter's 1980. Generic strategies as determinants of strategic group membership and organizational performance. *Academy of Management Journal*, 27, 467-488.
- Doley, P., and Sharma, M. J. 2016. Fostering Market Homogeneity Among Nations With Economic Similarity Using Hierarchical Clustering Technique. *International Journal of Science and Technology and Management*, 5, 439-450.
- Douglas, S. P., and Wind, Y. 1987. The myth of globalization. *Columbia Journal of World Business*, 22(4), 19– 29.

- Duncan, T., and Ramaprasad, J. 1995. Standardized Multinational Advertising: The Influencing Factors. *Journal of Advertising*, 24, 55-68.
- Elinder, E. 1965. How International Can European Advertising Be?. *Journal of Marketing*, 29, 7-11.
- Eunju, K., Charles, R.T., Heewon, S., Jooyeon, L., Udo, W., David, M.C.N., and Fanghua, 2012. *Global marketing segmentation usefulness in the sportswear industry*. *Journal of Business Research*, 65, 1565–1575.
- Fatt, A. C. 1967. The Danger of "Local" International Advertising. *Journal of Marketing*, 31, 60-62.
- Griffith, D.A., Chandra, A., and Ryans Jr, J.K. 2003. Examining the Intricacies of Promotion Standardization: Factors Influencing Advertising Message and Packaging. *Journal of International Marketing*, 11, 30-47.
- Griffith, D.A., Hu, M.Y., and Ryans Jr, J.K. 2000. *Process Standardization across Intra- and Inter-Cultural Relationships*. *Journal of International Business Studies*, 31, 303-324.
- Gunther, B., and Andrea, H. 1998. *Diagnosing Means-End Structures to Determine the Degree of Potential Marketing Program Standardization*. *Journal of Business Research*, 42, 151–159.
- Harvey, M.G., Lusch, R.F., and Cavarkapa, B. A. 1996. *Marketing Mix for the 21st Century*. *Journal of Marketing Theory and Practice*, 4, 1-15.
- Henzler, H., and Wilhelm, R. 1986. Facing Up to the Globalization Challenge. *McKinsey Quarterly*, 52-68.
- Hu, M.Y., and Griffith, D.A., 1997. Conceptualizing the global marketplace: marketing strategy implications. *Marketing Intelligence and Planning*, 15/3, 117–123.
- Jain, S. C. 1989. Standardization of International Marketing Strategy: Some Research Hypotheses. *Journal of Marketing*, 53, 70-79.
- Jaworski, B. J., and Kohli, A. J. 1993. Market orientation: Antecedents and consequences. *Journal of Marketing*, 57, 53–70.
- Jeon, J. O., and Beatty, S. E. 2002. Comparative advertising effectiveness in different national cultures. *Journal of Business Research*, 55, 907–913.
- Johansson, J.K., and Yip, G.S. 1994. Exploiting globalization potential: U.S. and Japanese strategies. *Strategic Management Journal*, 15, 579–601.
- John, H., and Marta, O. 2013. *Firms' adoption of international standards*. *Journal of Policy Modeling*, 35, 289–306.
- John, W., Steven, L., Tamara, G., and Leslie, R. 2002. *Cultural values and important possessions: a cross-cultural analysis*. *Journal of Business Research*, 55, 923–931.
- Journal of Research in Marketing*, 23, 227–239.
- Keegan, W. J. 1969. Multinational Product Planning: Strategic Alternatives. *Journal of Marketing*, 33, 58-62.
- Kim, L., and Lim, Y. 1988. Environment, generic strategies, and performance in a rapidly developing country: A taxonomic approach. *Academy of Management Journal*, 31, 802-827.
- Koku, P.S. 2005. *Towards an Integrated Marketing Strategy for Developing Markets*. *Journal of Marketing Theory and Practice*, 13, 8-21.
- Koslow, S., Shamdasani, P., and Touchstone, E. 1994. Exploring language effects in ethnic advertising: A sociolinguistic perspective. *Journal of Consumer Research*, 20, 575–585.
- Krugman, H. E. 1972 Why Three Exposures May Be Enough?. *Journal of Advertising Research*, 12, 11-14.
- Laroche, M., K. V. H., Pons, F., and Zhou, L. 2001. A model of advertising standardization in multinational corporations. *Journal of International Business Studies*, 32, 249–266.
- Leslie, D. A. 1995. The Globalization of Advertising Agencies, Concepts, and Campaigns. *Economic Geography*, 71, 402-426.
- Levitt, T. 1983. The Globalization of Markets. *Harvard Business Review*, 61, 92-102.
- McAlister, L., Srinivasan, R., and Kim, M.C. 2007. *Advertising, Research and Development, and Systematic Risk of the Firm*. *Journal of Marketing*, 71, 35-48.
- Melewar, T. C., and Vemmervik, C. 2004. International advertising strategy: A review, reassessment and recommendation. *Management Decision*, 42, 863–881.
- Mirjaliisa, C. 2007. Language matters in global communication. *Journal of Business Communication*, 44, 260–282.
- O'Brien, P.C. 1992. Robust Procedures for Testing Equality of Covariance Matrices. *International Biometric Society*, 3, 819-827.
- Okazaki, S. 2004. *Do multinationals standardise or localise? The cross-cultural dimensionality of product-based Web sites*. *Internet Research: Electronic Networking Applications and Policy*, 14, 81-94.
- Ozsomer, A., and Simonin, B. L. 2004. Marketing program standardization: A cross-country exploration. *International Journal of Research in Marketing*, 21, 397–419.
- Papavassiliou, N., and Stathakopoulos, V. 1997. Standardization versus adaptation of international advertising strategies: Towards a framework. *European Journal of Marketing*, 31, 504-527.
- Peebles, D.M., and Ryans, Jr, J.K., and Vernon, I.R. (1978). *Coordinating International Advertising*. *Journal of Marketing*, 42, 28-34.
- Ries, A., and Trout, J. 1986. *MARKETING WARFARE*. *Journal of Consumer Marketing*, 3, 77 – 82.
- Samiee, S., and Roth, K. 1992. The influence of global marketing standardization on performance. *Journal of Marketing*, 56, 1–17.
- Sassen, S. (1991). *The global city*. New York, London, Tokyo. *Princeton: Princeton University Press*.
- Schuster, C., and Copeland, M. 1999. Executive insights: Global business exchanges-Similarities and differences around the world. *Journal of International Marketing*, 7, 63–80.
- Severn, J, Belch, G.E., and Belch, M.A. 1990. *The Effects of Sexual and Non-Sexual Advertising Appeals and Information Level on Cognitive Processing and Communication Effectiveness*. *Journal of Advertising*, 19, 14-22.
- Solberg, C. A. 2000. Standardization or Adaptation of the International Marketing Mix: The Role of the Local Subsidiary/Representative. *Journal of International Marketing*, 8, 78-98.
- Sorenson, R. Z., and Wiechmann, U. E. 1975. How multinationals view marketing standardization. *Harvard Business Review*, 53, 38– 56, 166– 167.
- Steenkamp, J. B., Batra, R., and Alden, D. L. 2003. How perceived brand globalness creates brand value. *Journal of International Business Studies*, 34, 53–65.

- Steenkamp, J-Benedict E. M., and Ter Hofstede, F 2002. International market segmentation: Issues and perspectives. *International Journal of Research in Marketing*, 19, 185–213.
- Street, E., and Jackson, L. 1990. *ADVERTISING*. *Journal of the Royal Society of Arts*. 3140, 247-257.
- Sundaram, A. K., and Black, J. 1992. The environment and internal organization of multinational enterprises. *Academy of Management Review*, 17, 729–757.
- Szymanski, D. M., Bharadwaj, S. G., and Varadarajan, R. 1993. Standardization versus adaptation of international marketing strategy: An empirical examination. *Journal of Marketing*, 57, 1–17.
- Tai, S.H., and Wong, Y.H. 1998. Advertising Decision Making in Asia: Global versus Regal Approach. *Journal of Managerial Issues*, 10,318-339.
- Teece, D. J. 2010. *Business Strategy and Innovation*. *Long Range Planning*, 43,172-194.
- Vakratsas, D., and Ambler, T. 1999. *How Advertising Works: What Do We Really Know?*. *Journal of Marketing*. 63, 26-43.
- Van Raaij, W.F. 1997. Globalization of marketing communication?. *Journal of Economic Psychology*, 18, 259-270.
- Walters, P. G. 1986. International Marketing Policy: A Discussion of the Standardization Construct and Its Relevance for Corporate Policy. *Journal of International Business Studies*, 17, 55-69.
- Wang, X., and Yang, Z. 2011. Standardization or Adaptation in International Advertising Strategies: The Roles of Brand Personality and Country-Of-Origin Image. *Asian Journal of Business Research*, 1, 25-36.
- White, D.S., and Griffith, D.A. 1997. Combining corporate and marketing strategy for global competitiveness. *Marketing Intelligence and Planning*, 15, 173–178.
- Wind, Y. 1986. The Myth of Globalization. *Journal of Consumer Marketing*, 3, 23-6.
- Zou, S., and Cavusgil, S. T. 2002. The GMS: A Broad Conceptualization of Global Marketing Strategy and Its Effect on Firm Performance. *Journal of Marketing*, 66, 40-56.

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