Using the Kelly Repertory Grid to Determine the Impact of Country of Origin (COO) and Ethnocentrism on the Evaluation of High Involvement Products

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Abstract

This study assesses the relevant saliency of country of origin (COO) and ethnocentrism in shaping the perceptions of high involvement product selection. The research used the Kelly repertory grid technique combined with depth interviews to elicit the attributes associated with the perceptions of six automobile manufacturers, three from the United States (General Motors, Ford, Chrysler) and three from Japan (Toyota, Honda, Nissan). Respondents were asked to rate each of the six automobile manufacturers on each of the identified constructs using a 5-point Likert scale. Ethnocentrism was measured in the study using the CETSCALE. The results of the study supported hypothesis I in that consumers exhibiting a high ethnocentrism score had more favorable perceptions of domestic automobiles compared to foreign manufacturers.

Keywords: Kelly Repertory Grid, Country of Origin, ethnocentrism, CETSCALE

JEL Classification: L22, L25

1. Introduction

Companies and countries are engaged in competition at every level in an increasingly complex and tightly-linked world (Fetscherin, 2010). Consumers are increasingly exposed to products from different countries with globalization and the role of country of origin (COO) cues, how consumers perceive products from a country (Elliott & Cameron, 1994), becoming more salient. Numerous studies have demonstrated that the Country of Origin (COO) effect, the phenomenon of transferring a predisposition about a specific country to products from that country, can positively or negatively affect product evaluations and buying behavior (Hong & Wyer, 1989; Tse & Gorn, 1993; Ahmed & d'Astous, 1995).

Not considering COO and product country image effects with so few sources of sustainable competitive advantage in an increasingly competitive marketplace must be regarded as a failure in strategic thinking that deserves to be re-evaluated as a matter of urgency. While the importance of marketing mix variables such as price and product quality have been strongly established, the national origin of the product and role of the image of the product's COO are the subject of ongoing research (Knight, 1999).

Interconnected to COO effects is consumer ethnocentrism, a latent construct that reflects a tendency to favor domestic products over those of foreign origin (Nielsen & Spence, 1997). Consumer ethnocentrism focuses on the appropriateness and morality perceived when purchasing foreign goods, as well as consumer loyalty to domestically produced goods (Shimp & Sharma, 1987). Lantz and Loeb (1996) affirm that, "ethnocentrism is the term which has often been applied to the home buying portion of the COO effect". Knowing consumers' buying motivations, and developing close relationships with them, are critical means of competition for firms in today's increasingly crowded marketplaces. Of special significance are consumer attitudes towards foreign and domestic products, and the ethnocentricity that affects those (Erdogan & Uzkurt, 2010).

Despite the extant research on COO, few studies utilize methodology to identify personal key attributes and images consumers use that influence evaluations of products. A common problem of all cognitive-behavioral models of product choice is that of the identification of factors influencing the behavior of interest. This study implements the Kelly Repertory Grid methodology to identify the factors influencing consumer evaluations of automobile manufacturers, both foreign and domestic. Kelly (1955) argues that individuals use their own personal constructs to understand and interpret events that occur around them and that these constructs are tempered by the individual's experiences.

This research provides a methodological approach to exploring Country of Origin (COO) and Ethnocentrism by studying the idiosyncratic views of individuals with regard to automobile manufacturers. Respondents were asked their perceptions of three U.S. automobile manufacturers-General Motors, Ford, and Chrysler and three Japanese automobile manufacturers-Toyota, Honda, Nissan. We operationalize this approach through the Repertory Grid Technique, a structured interview technique motivated by Kelly's Personal Construct Theory, and propose a content-analytic procedure combining quantitative and qualitative information.

Thus, the objectives of this paper are twofold. First, this study identifies factors American consumers use in evaluating automobile manufacturers, three domestic and three Japanese, by the Kelly Repertory Grid. Second, this study assesses the impact of the Country of Origin and Consumer Ethnocentrism on the product factors identified by the Kelly Repertory Grid procedure.

2. Conceptual Overview-Country of Origin

Empirical evidence suggests that the country of origin of a product affects consumers' product evaluations (Han & Terpstra, 1988); Kaynak & Kucukemiroglu, 1992; Hong & Wyer, 1989). Consumers tend to hold stereotyped images of products made in different countries and the country of origin, similar to price and brand name, represents an extrinsic cue in consumer product evaluations.

According to Roth and Romeo (1992), COO is 'the overall perception consumers form of products from a particular country, based on their prior perceptions of the country's production and marketing strengths and weaknesses'. Accordingly, the 'made in' concept has been broadly defined as the positive or negative influence that a product's country of manufacture may have on consumers' decision processes or subsequent behavior.

2.1 Ethnocentrism

“Ethnocentrism” relates to the propensity of individuals to see their cultural group as proving the norms for acceptable behaviors and preferences (Erdogan & Uzkurt, 2010). Individuals that are highly ethnocentric are intolerant and judgmental with respect to cultures different from their own and perceive ethnic and national symbols and values as a source of pride, while often despising the values of others (Luque-Martinez *et al.*, 2000). Consumer ethnocentrism conveys the effects of buying intentions of products from the home country and countries that are perceived to resemble or differ from it (Kaynak & Kara, 2002).

2.2 Kelly Repertory Techniques

The advantage of the Kelly Repertory Grid method is that it relies upon an individual’s own subjective and meaningful construing of reality and there is no need to pre-specify the attributes which a subject will evaluate. The repertory grid methodology ensures that the individual’s perception of reality is built up carefully and consistently by getting an individual to compare the similarities of grid elements and provides a unified context for the rating products (Timmerman et al., 1982).

Based on previous research, the following hypotheses are proposed in this study:

***H1*:** Consumers exhibiting high levels of ethnocentrism will have less favorable attitudes towards Japanese automobiles than those with low levels of ethnocentrism.

***H2*:** Consumers exhibiting high levels of ethnocentrism will have more favorable attitudes towards American automobiles than Japanese automobiles.

To be consistent with Shimp and Sharma (1987), these hypotheses should be supported.

3. Research Methodology

3.1 Kelly Repertory Grids

To obtain data on the factors influencing automobile purchases, 30 respondents were asked to participate in the repertory grid analysis. The respondents varied in age, education, gender and social class variables with each subject interviewed in a lengthy session by the researchers. A sample of 30 is more than is needed to fully extract all constructs due to the intensive nature of the RepGrid. No new constructs are normally added even if the sample size is increased (Ginsberg, 1989).

The elicitation of the repertory grid data involved four general decisions with regard to the research design: (1) the selection of the repertory grid elements (2) the elicitation of personal constructs (3) the scaling of the grid elements on the personal constructs and (4) the ranking of the personal constructs in terms of the respondent's subjective importance weights. The six grid elements allowed respondents to differentiate between the automobile manufacturers on the basis of physical and non-physical attributes.

Respondents were asked their perceptions of three U.S. automobile manufacturers-General Motors, Ford and Chrysler and three Japanese automobile manufacturers- Toyota, Honda and Nissan. The six automobile manufacturers were combined in randomly selected triads and presented to respondents. For every triad, participants were asked to "*think of a property or quality that makes two of the products alike and which discriminates these two from the third*." From the first answer, laddering down and up procedures were applied to the positive and negative poles of each construct to get the core of the answer. The same procedure was repeated until a point was reached at which no new attributes arose for two consecutive triads.

After having finished this phase, each respondent was asked to rate each of the six automobiles using five-point bipolar scales. Each respondent was instructed that the difference between successive scale units was equal. Each scale was constructed in such a way that the negative pole was indicated by the score 1 and the positive pole by a score of 5. Table I provides a sample of the results for one participant.

Each respondent was asked to rate their personal constructs in terms of importance. First, each respondent was requested to specify the construct they considered most important in choosing an automobile. This construct was assigned a value of 100. Next, each respondent was asked to express their subjective weights for the remaining constructs, bearing in mind the score of the most important construct.

3.2 CETSCALE and Ethnocentrism

To measure consumer ethnocentrism in the final phase of the study, we used Shimp and Sharma's (1987) original CETSCALE. Respondents are asked to respond to a set of 17 statements, which assessed consumers ethnocentric tendencies using a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). The 17 items were aggregated to form a total ethnocentrism score for each respondent and this scale has been used extensively in previous Country of Origin studies (e.g. Balabanis &Diamantopoulos, 2004; Yagci, 2001). This information is contained in Table I.

4. Results

The scores obtained from the interviews form the basis for the following analysis. In terms of both the number and range of constructs, some clear differences between the respondents exist. The number of constructs elicited ranged from four to seven. In sum, the 30 respondents specified 23 constructs. This variation in terms of number of elicited constructs suggests some degree of variability in the number of cognitive constructs used to differentiate between automobiles.

Table II specifies the frequency which the respondents specified each construct. The findings demonstrate that there are clear differences in constructs that individuals use to discriminate between automobile manufacturers. The most frequently mentioned constructs in the evaluation of automobile manufacturers were gas mileage, country of origin, price (affordability) and style/looks

As indicated previously, each respondent was asked to indicate the subjective importance they attach to the personal constructs when choosing an automobile. The most important construct was assigned a value of 100 and each respondent was asked to express their subjective weights for the remaining constructs, bearing in mind the score of the most important construct Table III gives the results of this analysis for those constructs mentioned by at least eight respondents. The results indicate that country of origin along with economic factors such as gas mileage, price of vehicles, reliability, and quality are important attributes.

Each respondent was asked to rate each of the six automobile manufacturers on each of the identified constructs using a 5-point Likert scale with 1 representing the negative pole and 5 the positive pole. Table IV indicates that the United States country of origin is viewed as positive for automobile manufacturers while Japan is negative. Japanese automobiles are perceived to be superior to American products for gas mileage and durability. American automobiles rated higher than Japanese products on reliability, quality and style.

Reliability analysis was performed on the 17-item CETSCALE and the results are shown in Table V. The cronbach alpha coefficient was .939 so it can be accepted that all 17 items used are measuring the same construct (ethnocentrism).

5. Hypothesis Testing

H1. Consumers exhibiting high levels of ethnocentrism will have less favorable attitudes towards Japanese automobiles than those with low levels of ethnocentrism.

This hypothesis was tested using a paired samples t-test comparing scores from the CETSCALE with those on the evaluation of constructs for automobile manufacturers. As hypothesized, there are significant differences at the $p < .05$ level indicating that individuals with a high level of ethnocentrism have a less favorable attitude toward Japanese automobiles. Therefore, this hypothesis is supported.

H2. Consumers exhibiting high levels of ethnocentrism will have more favorable attitudes towards American automobiles than Japanese automobiles.

This hypothesis was tested using a paired samples t-test comparing scores from the CETSCALE with those on the evaluation of constructs for automobile manufacturers. As hypothesized, there are significant differences at the $p < .05$ level indicating that individuals a high level of ethnocentrism have a more favorable attitude toward American automobiles. Therefore, this hypothesis is supported

6. Limitations and Future Research

This study used a convenience sample as respondents were recommended by colleagues of the authors and students from a college located near Albany, New York. Future studies should use a random sample in order to be more confident in generalizing the results to a larger population. A more diverse sample is also recommended to allow for the most effective elicitation of constructs used to evaluate products.

Future research studies should enhance the quantitative component of this research by using exploratory factor analysis to uncover underlying structures of the variables. A scale should also be generated using the constructs identified in TABLE III and distributed to a larger sample along with the CETSCALE.

7. Conclusion

This research portrayed the significance of qualitative research using the KRG in identifying personal constructs which could be used to form the basis of survey research. American Automobile manufacturers need to reposition their brands as being fuel efficient as this is the most important attribute in vehicle selection and Japanese vehicles are ranked higher. In addition, respondents rated Japanese automobiles superior in comfortability, reliability & dependability. United States automobile manufacturers should highlight “Made in America” as this is an important attribute for American consumers. They should also emphasize style and comfort as these are perceived advantages in comparison to Japanese products.

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Appendix

TABLE I: Sample from the repertory grid from one participant									
			1	**Scale 1-5**					**5**
Triads-3 Automobile Manufacturers			**Negative Pole**	**GM**	**FD**	**CH**	**TO**	**HO**	**NI**	**Positive Pole**
Chrysler	General Motors	Nissan	Japanese	5	**5**	**5**	**1**	**1**	**1**	American
Ford	Chrysler	Nissan	Not affordable	4	**5**	**4**	**4**	**3**	**1**	Affordable
Toyota	Nissan	General Motors	Poor gas mileage	3	**2**	**3**	**5**	**4**	**3**	Good gas mileage
Nissan	Chrysler	Honda	Not attractive	4	**2**	**5**	**2**	**3**	**5**	Stylish (attractive)
Ford	General Motors	Honda	Poor service	4	**1**	**2**	**4**	**5**	**3**	Good service
General Motors	Chrysler	Ford	Not reliable	5	**1**	**4**	**3**	**3**	**3**	Reliable
			GM=General Motors							TO=Toyota
			FD=Ford							HO=Honda
			CH=Chrysler							NI=Nissan

	TABLE II- Content of Repertory Grids	Respondents																												
	Description of Constructs	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**TOTAL**
1	Gas Mileage	x	x	x	x	x		x	x	x		x		x		x	x	x	x	x	x		x			x		x	x	x	x	**22**
2	United States-Japan	x	x		x			x	x	x	x	x		x	x		x	x	x	x	x	x			x		x			x	x	**20**
3	Price (Affordability)	x	x	x	x	x	x	x				x			x	x		x				x		x		x	x			x	x	**17**
4	Style/looks		x		x					x		x	x		x				x	x	x	x	x	x		x		x		x	x	**16**
5	Durability	x	x	x	x	x					x			x	x	x			x	x				x								**12**
6	Comfortability				x	x					x		x		x	x			x			x						x	x			**10**
7	Reliability	x					x			x											x	x	x		x				x	x	x	**10**
8	Safety					x					x	x			x						x		x	x	x		x					**9**
9	Quality						x	x		x			x												x		x	x	x			**8**
10	Power		x																x					x	x							**4**
11	Warranty	x												x														x				**3**
12	Truck Bed																x	x									x					**3**
13	Accessories (features)										x									x									x			**3**
14	Brakes						x										x													x		**3**
15	Tires								x								x									x						**3**
16	Dependability				x								x																			**2**
17	Hybrid						x											x														**2**
18	Selection-# models								x					x																			**2**
19	Service			x																											x	**2**
20	Recalls			x																												**1**
21	Trade in value			x																												**1**
22	Reputation																						x									**1**
23	Engine							x																								**1**

TABLE III

Constructs	Average Weight
Poor gas mileage/Good gas mileage	**94**
Japanese/American	**87**
Priced too high/Good Value	**84**
Poor Reliability/Good Reliability	**82**
Poor quality/Good quality	**80**
Not stylish(poor looks)/Stylish	**77**
Poor durability/Good durability	**74**
Low comfortability/High comfortability	**69**
Poor safety/Good safety	**65**

TABLE IV

Evaluation of each Automobile manufacturer on important

Constructs	General Motors	Ford	Chrysler	Toyota	Honda	Nissan
Poor gas mileage/Good gas mileage	2.6	2.2	2.9	3.2	3.4	3.0
Japanese/American	4.3	4.2	4.2	1.6	1.3	1.1
Priced too high/Good Value	2.9	2.7	2.6	3.1	2.8	2.6
Poor Reliability/Good Reliability	3.6	3.4	3.5	2.9	3.2	3.2
Poor quality/Good quality	3.6	3.6	3.4	3.2	3.4	2.9
Not stylish(poor looks)/Stylish	4.1	3.5	4	3.5	3.2	3.1
Poor durability/Good durability	3.1	3.4	3.3	3.9	3.8	3.5
Low comfortability/High comfortability	3.5	3.3	3.2	3.9	3.4	3.1
Poor safety/Good safety	4.0	3.8	3.6	4.2	3.7	3.4

5 point Scale(1=negative, 5=positive)

TABLE V-Descriptive Statistics of Responses to the CETSCALE	**Low 1-2**	**Medium 3-4-5**	**High 6-7**	**Mean**	**Std. Dev.**
American People should always buy American-made products instead of imports.	13	14	3	3.30	1.86
Only those products that are unavailable in the U.S. should be imported.	8	18	4	3.37	1.63
Buy American-made products. Keep America working.	1	17	12	5.17	1.18
American products, first, last and foremost.	7	18	5	3.50	1.61
Purchasing foreign-made products is un-American.	21	8	1	2.27	1.31
It is not right to purchase foreign products, because it puts Americans out of jobs.	14	14	2	2.73	1.51
A real American should always buy American-made products.	17	12	1	2.60	1.50
We should purchase products manufactured in America instead of letting other countries get rich off us.	8	19	3	3.53	1.50
It is always best to purchase American products.	9	19	2	3.40	1.43
There should be very little trading or purchasing of goods from other countries unless out of necessity.	16	12	2	3.00	1.51
Americans should not buy foreign products, because this hurts American business and causes unemployment.	15	13	2	2.93	1.46
Curbs should be put on all imports.	10	19	1	3.03	1.30
It may cost me in the long-run but I prefer to support American products.	4	18	8	4.37	1.50
Foreigners should not be allowed to put their products on our markets.	19	11	0	2.27	1.14
Foreign products should be taxed heavily to reduce their entry into the U.S.	13	17	0	2.87	1.25
We should buy from foreign countries only those products that we cannot obtain within our own country.	13	16	1	2.93	1.51
American consumers who purchase products made in other countries are responsible for putting their fellow Americans out of work.	16	13	1	2.47	1.17

Overall Cronbach Alpha .939