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A Re-Examination of Cross-National Differences in the Relationship Between Perceived Risk and Brand Loyalty

Dr. Joel Saegert, Dr. Robert J. Hoover**, and Dr. Michael Landeck****

ABSTRACT: A 1978 cross-national study of the association between risk perception and brand loyalty conducted by Hoover, Green and Saegert found hypothesized positive relationships for a US sample of consumers, but not for a comparable Mexican sample. Similarly, Verhage, Yavas and Green (1990) reported a failure to observe the expected risk perception/brand loyalty relationship in consumers in four other countries. The present study attempted to replicate the original Hoover, et al. study in Mexico. In contrast to the previous findings, positive relationships between brand loyalty and risk perception were observed for samples from both countries. Differences were observed in level of risk perception between the US and Mexican samples; however, further analysis across US ethnic subgroups (US Hispanics and non-Hispanics) suggests that the observed difference between nationalities is more likely attributable to marketplace differences than cultural differences (i.e., US Hispanics and non-Hispanics did not differ from each other).

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I. Introduction.

The awakening of American business to the need to develop international markets has prompted interest in comparing consumer behavior relationships across countries. One such relationship, that between consumer risk perception and attendant brand loyalty¹, was investigated in the 1970's through comparisons between samples of US and Mexican consumers on three packaged convenience good categories, namely, bath soap, toothpaste and instant coffee.² For a US sample, this study found the expected positive relationship between the amount of risk perceived in choosing a brand and the amount of measured brand loyalty; however, for a comparable sample of urban Mexicans, the predicted relationship was not observed (in two of the three product categories). That is, although individuals in the Mexican sample were found to be relatively brand loyal, loyalty was independent of the degree of risk they professed to feel in trying a brand they had never bought before. The differences were discussed in terms of possible fatalistic attitudes among consumers in a "traditional" society, one with a history of relatively low perceived product quality and markets protected by government trade barriers. According to this hypothesis, because the population of more traditional countries may be relatively passive regarding brand choice and because product quality may be perceived to be *generally* unsatisfactory, consumers do not consider brand loyalty on their part to be instrumental in avoiding risk in product choice.

The recent flurry of activity surrounding the prospective North American Free-Trade Agreement between Canada, the United States and Mexico, as well as major changes in the Mexican economy resulting from the opening of the country to foreign enterprise, have stimulated renewed interest in the need to study consumer behavior relationships in Mexico vis a vis those in the US. In this light, as well as the spirit of recent calls for more attempts to replicate social science research in general, especially cross-nationally³, this study repeated the operations of Hoover, et al.⁴, to see if their findings could be replicated, i.e., to determine if Mexican consumers still exhibit lower brand loyalty in the face of perceived risk.

II. The 1978 Study.

The Hoover, et al. (1978) study⁵ consisted of slightly over 100 interviews with socioeconomically similar consumers in each of two cities, Houston, Texas and Monterrey, Nuevo Leon, Mexico. The results showed the Mexican sample to be relatively less likely to express risk from "trying a brand of (the product) you have never used before," but also

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1. S.M. Cunningham, *The Major Dimensions of Perceived Risk*, in RISK TAKING AND INFORMATION HANDLING IN CONSUMER BEHAVIOR (D.F. Cox ed., 1967).
 2. R.J. Hoover, Robert T. Green, and Joel Saegert, *A Cross-National Study of Brand Loyalty and Perceived Risk*, 42 J. OF MARKETING 102-108 (1978) (hereinafter, all references to this study in the notes and in the text will be to "Hoover, et al.").
 3. See generally JAMES W. NEULIP, *HANDBOOK OF REPLICATION RESEARCH IN THE BEHAVIORAL AND SOCIAL SCIENCES* (1990).
 4. Hoover, et al., *supra* note 2.
 5. *Id.*
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that the Mexicans were substantially more brand loyal as measured by their reports of "the last three brands purchased" for three product categories. Perhaps more interestingly, plots of the average amount of brand loyalty by the level of risk perceived indicated a strong positive relationship for the US respondents, but relatively flat curves for two of the three product categories for the Mexican respondents. Only for toothpaste was the degree of correspondence between risk perception and brand loyalty similar across national groups. Thus, the Hoover, et al. study, along with more recent investigations in other countries⁶, has led some authors to conclude that "the risk reduction strategy of brand loyalty may not be widely employed by consumers outside the U.S.A."⁷

III. Replication of the Hoover, et al. Study.

The present study was prompted by awareness that substantial changes have occurred in the Mexican marketplace since the publication of the Hoover et al. study⁸. For example, during the last several six-year presidential terms, Mexican administrations have essentially opened Mexico's borders to trade in consumer goods from North American and other Western manufacturing nations. Where extensive protection from importation of goods existed at the time of the 1978 study, present policy allows relatively free trade. For example, loaded truck crossings into Mexico from Laredo, Texas, the second busiest land trade port with Mexico, was at 73,255 in 1979, the year following the Hoover, et al. study; in 1990, this number had increased to 261,064.⁹ Such increases in availability of consumer goods in the Mexican economy, along with rises in Mexican buying power and greater access to promotion of goods through mass media, may have provided a marketplace more similar to that of the US than before. If, among other factors, increases in availability of foreign-produced brands results in perception of improved product quality, then perhaps brand loyalty as a response to perceived risk also might be increased. Thus, a re-examination of consumer behavior patterns reported in the 1978 study seems warranted, especially in light of even further changes expected as a result of the US-Mexico free trade agreement.

Sampling was conducted in two Mexican and two US cities, Laredo and Corpus Christi in Texas and Nuevo Laredo and Monterrey in Mexico. Aside from their convenient access to the research team, the locations were chosen to represent both border and interior communities of the respective countries, and to insure that a proportion of US consumers of Hispanic ethnicity was included in the sample. This latter consideration allowed comparisons of the two groups studied in Hoover, et al. with a third sample, namely Hispanics in the US. In this way, any differences observed between consumers in the two countries might be analyzed in terms of cultural ethnicity vs. nationality.

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6. Bronislaw J. Verhage, Ugur Yavas, and Robert T. Green, *Perceived Risk: A Cross Cultural Phenomenon?*, 7 INTL. J. OF RESEARCH IN MARKETING 297-303 (1990).
 7. Verhage, et al., *supra* note 6; see also H. W. BERKMAN & C. GILSON, CONSUMER BEHAVIOR: CONCEPTS AND STRATEGIES (1986).
 8. Hoover, et al., *supra* note 2.
 9. See INST. FOR INTL. TRADE, TEXAS A & M INTL. UNIV., LAREDO, TX, REPORT OF LOADED TRUCK CROSSINGS (1991).
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As was the case in Hoover, et al., interviews had to be conducted by different procedures for citizens of the two countries, primarily as a result of relatively limited availability of telephone listings in Mexico. Interviews in the US were conducted via telephone while those in Mexico were conducted in person, door-to-door. In the two US locations, telephone numbers were randomly selected from current directories. In the two Mexico locations, sampling was accomplished by assigning numbers to streets in middle class areas of town with interviews attempted at every third house on randomly selected streets, skipping to the next house when residents were not at home. In both the US and Mexico samples, refusal rates were low, less than 10% in each case.

The interview consisted of a five-page questionnaire that asked a number of risk perception and brand loyalty questions for the original three product categories, as well as demographic information. We followed the wording of the questions used in Hoover et al.'s study and, consistent with their procedure, developed the Spanish-language version of the questionnaire through back-translation to preserve the meaning of the items rather than a literal rendering.

IV. Demographics of the Samples.

Although there were statistical differences between our US and Mexican samples in terms of demographic characteristics, the variation was relatively small and the samples can be considered roughly comparable. Observed demographic differences (all p 's < .05) were as follows: slightly more women were interviewed in the Mexican sample (85% vs. 73% for the US sample); the Mexican sample was slightly younger (mean = 38.4 years vs. 41.5); more of the Mexican sample had college degrees (46% vs. 30%); the income levels of the Mexican sample were substantially lower than those of the US (62% had less than \$2,000/month household income vs. only 39% for the US sample). In spite of these differences, the samples can be characterized as predominantly middle class, middle age women in both countries.

V. Results.

A. PERCEIVED RISK.

Following the procedure used by Hoover, et al., two 4-point Likert scale items concerning perceived danger in switching brands were summed as an index of perceived risk; thus, summed risk scores could vary from 2 to 8. In contrast to the findings of the Hoover, et al. study, the Mexican sample expressed higher risk perception for the three product categories than the US sample. Chi square analyses of risk perception levels across nationality were significant for all three products (all p 's < .001) in the direction of higher risk perceived by Mexican respondents.

Explanations for this departure from the 1978 results can be sought in the changes in consumer perceptions in the Mexican population as a function of economic and marketing changes in the country (as discussed above). We speculate that greater availability of foreign brands and their concomitant promotion in an atmosphere of free enterprise might increase Mexican perceptions of differences among brands, resulting in heightened perceived risk associated with switching brands. On the other hand, American perceived risk may now be lower than before; American consumers have experienced several decades

of intense brand proliferation and enhancement, as well as wide-spread consumer pressure on firms to increase brand effectiveness, perhaps with the outcome that perceived risk in switching has decreased, thus contributing to the result of comparatively higher risk perceptions in Mexico compared to the US.

B. BRAND LOYALTY.

Brand loyalty was measured, as in the case of Hoover, et al., in terms of the number of same-brand purchases over the last three occasions for each category: reported purchase of the same brand three times = 3, two times = 2, three different brands = 1. Analysis of variance showed that the observed difference in mean brand loyalty score across nationality was not significant for bath soap and toothpaste, but was significant for instant coffee ($p=.004$) in the direction of Mexican respondents being more loyal than US respondents (it should be noted that the US and Mexican respondents elicited approximately equal numbers of brands, overall). This mixed result echoes findings on brand loyalty among US Hispanics, namely, that some studies report greater Hispanic loyalty¹⁰, while others do not¹¹. An implication of our results is that brand loyalty may vary across nationalities from product category to product category, more likely as a function of differences in marketplace conditions than differences in culture per se, although this hypothesis remains to be tested directly.

C. RISK/LOYALTY RELATIONSHIPS.

Figures 1-3 show the mean brand loyalty (BL) score across levels of perceived risk (PR)

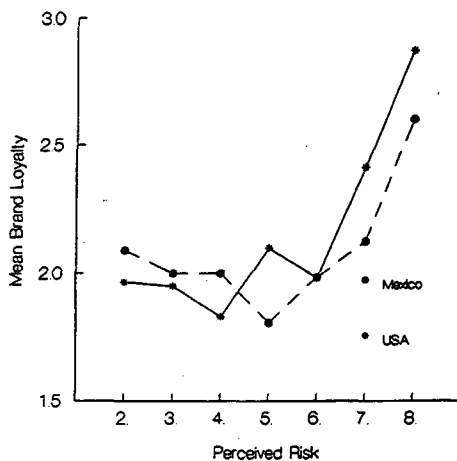


Figure 1. Brand Loyalty by Risk Perception for BATH SOAP

10. Rohit Deshpande, Wayne D. Hoyer, and Naveen Donthu, *The Intensity of Ethnic Affiliation: A Study of the Sociology of Hispanic Consumption*, 13 J. OF CONSUMER RESEARCH 214-200 (1986).
11. Robert E. Wilkes and Humberto Valencia, *Shopping-Related Characteristics of Mexican Americans and Blacks*, 3 PSYCHOL. AND MARKETING 247-259 (1986); see also Joel Saegert, Robert J. Hoover, and Marye T. Hilger, *Characteristics of Mexican-American Consumers*, 12 J. OF CONSUMER RES. IN MARKETING 104-109 (1985).

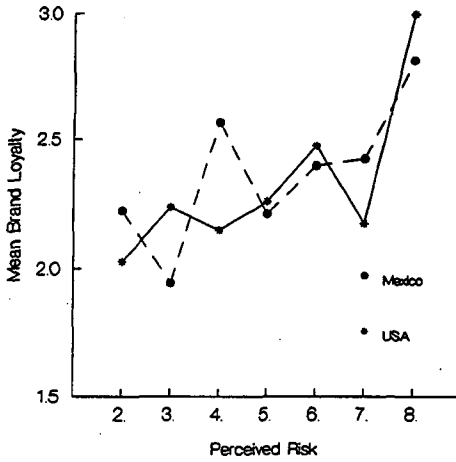


Figure 2. Brand Loyalty by Risk Perception for TOOTHPASTE

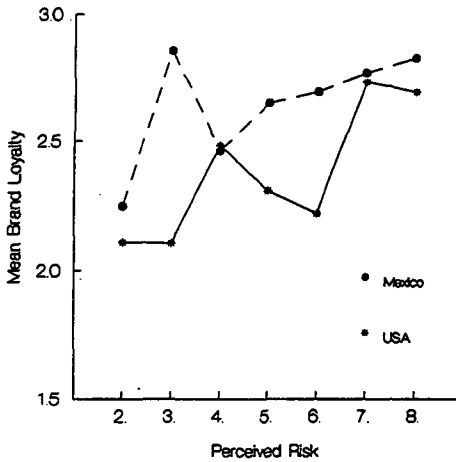


Figure 3. Brand Loyalty by Risk Perception for INSTANT COFFEE

for our US and Mexican samples. As can be seen, the relationship was similar across countries, consistent with the theoretical premise that higher perceived risk is associated with higher loyalty. For all three product categories, the interaction between PR and Nationality (i.e., a test of the hypothesis that the slopes of the curves were different across nationality) failed to reach conventional levels of significance (all p 's > .05). The fact that the relationship holds for the Mexican sample may reflect changes in the Mexican marketplace, e.g., that greater availability of higher quality brands has resulted in consumer behavior in Mexicans similar to that of their US counterparts.

A similar cross-national study of risk perception and brand loyalty¹² failed to find the hypothesized relationship in samples taken from four other countries (The Netherlands, Saudi Arabia, Thailand and Turkey). Using the standardized regression coefficient, β in BL = $\beta_{PR} + \alpha$, as an indication of an effect, Verhage, et al. reported that none of the coefficients for bath soap and toothpaste reached statistical significance. (Their study did not include instant coffee.) However, we noted that the sample sizes in their study were small and hypothesized that this might have accounted for the lack of statistical significance.

Comparable β coefficients for the three product categories for the two nationalities investigated in our study are shown in Table 1. As can be seen, although the coefficients were

Table 1.

Standardized Regression Coefficients (Brand Loyalty as a Function of Risk Perception) for Mexican and US Samples for Three Product Categories

Product Category	Nationality	β	t	p
Bath Soap	Mexico	.11	3.45	.001
	U.S.	.11	4.39	<.0001
Toothpaste	Mexico	.12	4.23	<.0001
	U.S.	.07	2.74	.006
Instant Coffee	Mexico	.06	2.48	.014
	U.S.	.08	3.11	.002

12. Verhage et al., *supra* note 6.

small, all were significant, in contrast to those reported by Verhage, et al. It should be pointed out that most of the coefficients they reported were within the range of those shown here, but that their samples were approximately half of ours, suggesting that limitations in the power of the statistical test for regression coefficients may have resulted in lack of significance in their analysis. At any rate, our data show a significant, if small (in terms of variability accounted for), relationship between brand loyalty and risk perception for both nationalities for all three product categories, in contrast to the results of the Hoover, et al. and Verhage, et al. studies.

VI. Interethnic Comparisons.

An interesting set of comparisons of our study's consumer behavior variables were those between Hispanic and non-Hispanic respondents within the US sample—that is, it was of interest to assess whether US Hispanics were more like Hispanics residing in Mexico or US non-Hispanics in terms of their risk perception and brand loyalty. A breakdown of risk perception levels for bath soap by ethnic group (Table 2) revealed a significant differ-

Table 2.
Frequencies and Percents for Risk Perception Level
by Nationality and Ethnicity for Bath Soap

Risk Perception Level	Ethnic Subgroup			Total
	Mexican Nationals	US Hispanics	US Non-Hispanics	
2	11 3.72	33 12.41	25 10.16	69 8.54
3	19 6.42	59 22.18	57 23.17	135 16.71
4	32 18.81	55 20.68	44 17.89	131 16.21
5	87 29.39	63 23.68	57 23.17	207 25.62
6	57 19.26	34 12.78	25 10.16	116 14.36
7	40 13.51	9 3.38	20 8.13	69 8.54
8	50 16.89	13 4.89	18 7.32	81 7.32
N	296	266	246	808
Total %	100	100	100	100

ence in the distribution of risk perception scores across the three groups ($p < .001$); inspection of the data suggests that the US Hispanic sample was more similar to the US non-Hispanics than to the Mexican sample (identical results were found for toothpaste and instant coffee). A non-orthogonal Chi-square comparison of the two US subgroups was not significant ($p = .22$) suggesting perhaps that the observed difference in Table 2 between US and Mexican nationals was a consequence more of marketplace differences than of cultural differences among Hispanics and non-Hispanics. A similar breakdown of the brand loyalty scores as well as the BL-RP relationship by ethnicity/nationality showed that brand loyalty and the character of the risk/loyalty relationship were equivalent for all three groups (US non-Hispanics, US Hispanics, Mexican nationals) for all three product categories (i.e., the brand loyalty levels and the RP-Nationality interactions across groups were not significant, all p 's $> .05$).

VII. Discussion.

As has been noted, Hoover et al's original interpretation of their finding of relatively less association between risk perception and brand loyalty in their Mexican sample was couched in terms of hypothesized "fatalism" in the Mexican population. This notion implies that a generally fatalistic outlook in a consumer population results in less reliance on brand loyalty in response to perceived risk because consumers consider action to be inconsequential. Such an attitude might also be viewed in terms of perceived differences in marketplace offerings. If brands are perceived to be generally unreliable, then perceived risk in changing brands may not be translated into risk-reducing behavior (i.e., brand loyalty). In either case (personal fatalism and/or low perceived product quality), consumers' observed behavior in the Hoover et al. study appears to be somewhat illogical: greater stated perceived risk in switching brands was not found to be associated with "not switching." Nevertheless, it remains possible that consumers in countries where brand quality and reliability are perceived to be poor may not manifest their stated perceptions of risk in subsequent loyalty. Whatever the reasons for the earlier lack of effect in Mexico, the present study provides a somewhat more reassuring demonstration of the expectation that brand loyalty is related to perceived risk in switching brands. It can be pointed out that, although the effect was small, and that there were some differences in sampling in our study and that of Hoover, et al. (i.e., sampling conducted in Laredo and Corpus Christi in our study vs. Houston by Hoover, et al. and in Nuevo Laredo and Monterrey in our study vs. only Monterrey by Hoover et al.), the expected relationship between perceived risk and brand was found in the Mexican as well as the US samples. Thus, the basic and perhaps common-sense assumption that higher perceptions of risk by consumers will result in greater brand loyalty is supported, even in a more "traditional" country.

It is possible to consider the differences between finding the risk perception/brand loyalty effect among Mexican nationals in our study and not finding the effect by Hoover, et al. in terms of changes that have occurred in the Mexican marketplace in the interim between the studies. Increased awareness of the relationship between brand-names and their reliability, for example, may have resulted in greater reliance on brands as a response to perceived risk in product choice. However, such a notion cannot be determined directly from the present data since the proposed level of awareness of brands, perhaps as a function of greater availability and quality of imported merchandise, was not assessed. Thus, a

direct test of the hypothesis that the risk-loyalty effect does not obtain in countries where perceived product quality is low remains a subject for further research. Demonstrations of consumer behavior differences across nationalities (for example, as was shown for level of risk perception between Mexicans and US residents in our study) have typically been accompanied by cautions to marketers against assumptions that consumer characteristics found in one's own culture will also occur in other cultures¹³, thus recommending a policy of testing consumer behavior relationships in each new country entered. Such advice seems inarguable; whenever a firm redefines its market to include new geographic territory, it must reassess that market, including customer motivations and state of competition, or run the risk that customer demand served domestically is not present in the new market. However, it is somewhat reassuring to find that such basic expected relationships as that between risk perception and brand loyalty can be found across cultures. On the other hand, the concept of assuming comparable levels of such consumer variables across product categories when formulating brand strategies is questionable. For example, in the present study, there were large differences between nationalities in overall degree of brand loyalty for instant coffee (Mexican consumers were more loyal), intermediate (but not significant) differences for toothpaste, and virtually no differences for bath soap. It is highly likely that marketplace conditions and customer motivations will vary considerably across product categories and further, that such conditions may either be equivalent or dramatically different across geographic or cultural boundaries. Thus the study's results suggest, perhaps not surprisingly, that marketers must be aware of consumer characteristics on a product category by product category basis, as well as country by country.

13. See BERKMAN & GILSON, *supra* note 7.
