Web Localization in International Online Banking

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Abstract
This study examines the relevancy of local culture to the form, presentation and content of 234 online banking web sites across 53 countries. The properties of online banking web sites from country to country are seen to reflect cultural differences in individualism, masculinity, uncertainty avoidance, and power distance from country to country. The most important of these differences are reflected in how human images are portrayed and what kind of environment is projected on the site. The implication to be drawn from this finding is that the increasing competition for online banking business and revenue will result in websites increasingly differentiated from country to country as a result of the benefits of adapting to local culture.
Introduction

As the domestic markets for online banking begin to mature in developed nations (Chou & Chou, 2000; Dewan & Seidmann, 2001), international banks are increasingly interested in capturing an estimated 750 million online banking customers (Citigroup, 2005), which are expected to emerge in the international arena over the next five years (Crede, 1998; Mattila, et al., 2003; Nsouli & Schaechter, 2002). At the same time, indigenous banks are discovering the many advantages of an online distribution channel. It is clear that “. . . the Internet opens a low-cost, high growth channel to the international investor. . .” (Otalvaro, et al., 1998, p. 251). This competitive milieu is compounded by the simultaneous expansion of a broad array of non-banking providers of financial services into traditional banking areas (Huang, 2007; Singh & Kundu, 2002). The result is an exceptionally challenging, dynamic and competitive market.

The resultant competitive forces drive banks to a posture where they must correctly assess consumer needs, desires, tastes and preferences in order to make their websites competitive (Bruno-Britz, 2006). Both banking and non-banking firms are fighting to position themselves to compete on the online banking front (Kalakota & Frei., 1998).

While indigenous banks in the international arena will prove fierce competitors for market share, large banking organizations possess numerous advantages in developing online channels of distribution for banking services (Crede, 1998; Chou & Chou, 2000). These advantages include capturing economies of scale, developing business associated with international trade, increasing market power, and developing a more powerful "brand image.” Banks are fully experienced in how to accomplish this
with the physical side of their operations, but online banking presents a different set of challenges.

Online banking provides bank customers with instant access to information on their accounts, and the bank's products and services. Online banking removes the physical constraints of access, and exposes the bank to a potentially much larger market than their existing customer base provides. The presence of other online banks simultaneously increases the competition for bank's market share and wallet share. A unique advantage of online banking in the international arena is the ability to facilitate expatriate inter-country cash flows. Access to online banking web sites has the potential to dramatically empower customers and thus increase the resultant competitive pressures on banks with online facilities.

To cater to their customers online in the various markets that they serve, banks may develop their website in one of two ways. One approach for a bank with an international presence is to develop just one site for use across national borders. This "one size fits all" strategy would have the advantage of giving the bank absolute control over the website's technology, content and form. In addition, unit costs would be reduced, as more customers are served from a single platform. A further advantage would be providing a consistent set of products and services, thereby reinforcing the bank's brand image. Consumer information and customer relations could be standardized and controlled uniformly across international borders. Problems with regulators in the bank’s home country would be reduced.

Alternatively, there are a number of reasons to argue for “web localization” (the adaptation of bank websites to local economic conditions, customs, tastes, preferences
and values) (Liao & Cheung, 2002; Rotchanakitumnuai & Speece, 2003). One such argument is that websites have an inherent moral component (Cooper, 2006). Therefore, to be creditable, the site’s moral values must be reflective of the target population.

A second argument arises from the fact that the ultimate success of a website is whether or not existing customers use it or potential customers are attracted to use it (Rai & Jain, 2006). To be successful, online banking sites must create value for users (Yu, 2001). The fact that local business practices in general are heavily impacted by local culture and market conditions is well established. There is every reason to expect that this would also be true for online banking websites (Wang, Y., et al., 2003).

This study investigates the extent to which banks with an international presence find greater advantages with a standardized or local approach to online banking facilities. This study further examines the role culture plays in the localization of bank web sites.

While many definitions of culture are possible, they generally revolve around the shared values, beliefs, and behavior patterns characterizing a group of people. In this study, we analyze the relationship between the website attributes and the four cultural dimensions of Hofstede (2007). We expect, a priori, that the managers of banks understand the significance of cultural differences, and would attempt to develop distinct websites for each of the countries in which they operate. If this is the case, it implies that banks are less likely to choose the “one size fits all” approach to developing their online banking websites.

**Literature Review**

While different definitions of culture are possible, the general approach to culture is that of the shared values, beliefs, and behavior patterns characterizing a group of
people (Samuel and Douglas, 2006). Cultural differences among countries do exist and the differences can be categorized in a variety of ways (Uichol, et al., 2006). One accepted approach to categorizing is to use the four cultural dimensions that were originally developed Geert Hofstede (Hofstede, 2001, 2007). These Cultural Dimensions include (1) the Power Distance Index (PDI), (2) the Individualism Index (IND), (3) the Masculinity Index (MAS) and (4) the Uncertainty Avoidance Index (UAI). The ratings on these dimensions are represented as an index score for each nation. The scores used here were collected from the website at http://www.geert-hofstede.com/geert_hofstede_contrarian_position.shtml.

These Cultural Dimensions were developed by analyzing a large data base of employee values scores collected by IBM between 1967 and 1973, covering more than 70 countries. Hofstede has found firms which make decisions in other countries based on their home front cultural values are likely to end up making bad decisions.

It should be noted that there may be methodological problems with Hofstede’s survey, and his conclusions are not universally accepted (McSweeney, 2002). In addition, there is evidence that the recent internationalization of commerce has mitigated cultural differences in Europe from the time of Hofstede’s survey (Gooderman and Norhaug, 2007); and, thus, it is possible that this effect has occurred elsewhere. Despite the criticisms, Hofstede’s framework stands as a paradigm for understanding cross-cultural behavior. A study by Brown and Buys (2005) of online banking services conducted by MBA students in South Africa revealed a strong, positive relationship between uncertainty avoidance and a concern with Internet banking security. Another example of the continuing validity of this framework is provided by Singh (2006), who
found three of Hofstede’s cultural dimensions linked to innovative behavior by consumers. These findings may be interpreted to suggest the continuing power and the relevancy of Hofstede’s framework.

The literature on consumer behavior suggests the importance of cultural factors in impacting a consumer’s ease of use or perceived ease of use for high technology products and services (Al-Gahtani, 2001; Singh, et. al., 2006a; Singh, et. al., 2006b; Singh, et. al., 2006c; Singh, et. al., 2005.) Guriting and Ndubisi, (2006) found cultural values to be relevant to online banking use in Borneo.

Methodology

The 234 bank websites surveyed in this study were located in 53 countries, for which Hofstede scores were available. These banks were not selected randomly. There was a bias towards the larger and more sophisticated banks in each country, and with an attempt at geographical diversification within a large country. Banks were selected that were thought to collectively represent the state of the industry in that country.

The overall unweighted averages of world values for cultural dimensions in all 74 countries surveyed by Hofstede (2007) are found in Table 1.

The cultural values found in the 53 countries surveyed in this study are contrasted to the unweighted values of the 74 original Hofstede countries in Table 1 below. These data suggest that countries having more prominent online banking activities tend to be more accepting of power distance as a cultural value, more accepting of individualism as a cultural value, less inclined toward masculinity as a cultural value, and much more tolerant of uncertainty as a cultural value.
Table 1: Cultural Dimensions Comparisons
(World and Study Averages)

<table>
<thead>
<tr>
<th>Cultural Dimension</th>
<th>PDI</th>
<th>IND</th>
<th>MAS</th>
<th>UAI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hofstede World Values (74 Countries)</td>
<td>55</td>
<td>53</td>
<td>50</td>
<td>64</td>
</tr>
<tr>
<td>Study Values (53 Countries)</td>
<td>55.4</td>
<td>54.3</td>
<td>48</td>
<td>58.8</td>
</tr>
<tr>
<td>Difference from World Averages</td>
<td>0.4</td>
<td>1.3</td>
<td>-2</td>
<td>-5.2</td>
</tr>
</tbody>
</table>

Surveyed Website Properties

Each of the surveyed bank websites were examined for numerous properties which were thought, *a priori*, to be related to UAI, PDI, MAS or IND. Dummy variables were generally used to indicate the presence (1) or absence (0) of these properties. The various properties examined are as follows:

- **Authority Figures.** Authority figures would include pictures of the President of the Bank, the Board of Directors, the President of the country or a leading historical figure like George Washington in the U.S. or Charles DeGaul in France. The use of authority figures is very common in the online banking sites of smaller U.S. banks (Singer, Ross and Avery, 2005).

- **People.** This variable reports whether or not the bank website presented any human image (cartoon-like characters do not count as a human image). The presence of human figures was expected to be comforting to certain socio-economic groups and to be more effective in certain cultures than others.

- **Customers.** Pictures of customers on an online banking website would include individuals using the banks services (e.g., cashing a check) or enjoying its products, e.g., a couple using a loan to finance a vacation.

- **Males.** In a similar manner to that of customers, in general, the presence or absence of males depicted at the web could decrease or increase the comfort specific individuals feel as a result of that presence.

- **Females.** The presence of women on a bank website might be expected to reassure those uncomfortable with uncertainty, if their presence connotes safety or stability in their culture. Alternatively, if women are perceived as out of place in the context of banking, their presence on websites could be expected to be negatively associated with uncertainty avoidance.
• **Family.** Family is defined as a group including a mother and child; father and child; a mother, father and children; or a nuclear family with extended family members. Families, to most individuals, suggest a comfortable and familiar setting, but images might not be effective on a website in a male dominated culture.

• **Middle Aged People.** This age category is defined to include all individuals not obviously teenagers, children or the elderly.

• **Elderly People.** Elderly people represent an important customer group for banks in both developed and developing countries where the population is maturing. Elderly people are frequently depicted at U.S. bank websites (Singer, Ross, Avery, 2005).

• **Children.** If children connote peace and security, the presence of children on a bank website might be expected to be positively associated with UAI. Children might also be expected to be negatively associated with MAS, as the presence of children is inconsistent with a macho image.

• **Professional Environment.** A professional environment is defined as one that shows images of an office or bank setting, people working on computers, or any other activity taking place in such a setting.

• **Technical Environment.** A technical environment is defined as one which shows computers, charts, foreign exchange or stock market tapes, or a pile of money. The anticipated concept here is that such depictions focus is on the resources or expertise of the bank.

• **Scenic Environment.** This environment occurs when the home page presents pictures of mountains, the sea, or some other local geographic features. This is one of the most common themes of U.S. bank home web pages (Singer, Ross, and Avery, 2005). Perhaps the intention of presenting a scenic environment is to produce pleasant and relaxing thoughts.

• **Gambling.** On the Internet, in general, free gambling opportunities prove a powerful lure to consumers (as suggested by their omniscient presence). However, gambling activity is not necessarily consistent with the image of solidarity, reliability and trust most banks generally wish to convey. Gambling is defined to include any game of chance offered by the bank, where the site visitor gets a chance at something for nothing.

• **Building and or Safety Vault.** When massive a bank building or safety vault is depicted on the website, this would seem to imply that the bank is both powerful and secure. Alternatively, these images may leave the website visitor with the feeling that people and, explicitly, the customers are not the focus of the bank.
• **Reference to Higher Power.** It may be that a bank can offer a “super” website that is in some sense deemed to be more powerful or prestigious than in the default home web page. Such a site might have restricted admittance to make it more exclusive. At Citibank, this site is referred to as “CitiDirect.”

• **Red and Blue Colors.** In the United States, red and blue are generally thought to be masculine or “power” colors (Hardin and Maffi, 1997). More than half the banks surveyed used this color scheme. As data was being collected, it became clear to the authors that a simple “0-1” dummy variable would not capture the essence of this variable because all red and blue sites were not alike. Some were subdued with a great deal of white present; some were exceptionally bold, with the entire site dominated by vibrant reds and blues; and others had red, but no blue, or visa versa. Therefore, this variable was coded as a “2” for really bold and dominant red and blue colors, a “1” for subdued red and blue, and “0” for some color scheme other than red or blue.

• **Multiple Languages.** If a bank offered its site only in the native language of the host country, it was coded “0.” If alternative language versions of the site were offered, or if the site offered a mix of the native language and English, it was coded “1.”

**Hypotheses**

In this study, cultural dimensions were measured as the difference between a specific country’s values and world values. Measuring cultural dimensions across countries by means of the difference between world values and specific country values converts the Hofstede scale from an absolute value to a relative value. Cultural dimensions were measured in this manner because the resultant data set allows comparison of the effect of inter-country cultural differences. These differences comprise the categorical independent variables used to test the hypotheses below.

The first cultural dimension examined is the **Power Distance Index (PDI)**, which measures the extent to which individuals in a society accept that power is distributed unequally as the normal state of affairs. The purpose of using an authority figure would be to generate consumer confidence and trust. Thus, if the bank’s website depicted
authority figures and male figures (indicators of a male dominant society), there should be a positive relationship with PDI and MAS. Depicting peers using bank services (Customers) could convey the message that the bank was not just for the elite, which would result in a negative association with PDI and a positive association with IND. To the extent that banks in countries with a high PDI are attempting to appeal to the “powerful,” showing a professional environment could prove beneficial. Similarly, in low PDI cultures, images of people in a non-professional environment could be more effective in attracting and holding customers.

A negative association is expected between PDI and the depiction of a scenic environment because it seems likely that a scenic environment would have universal appeal in low PDI cultures, and be less effective in high PDI cultures. The use of multiple languages was expected to be attractive to banking customers in a high PDI culture because it suggests the existence of differences between those with more education and international experience, and those with less. Similarly, multiple languages might prove less effective in low PDI cultures.

Thus, the first set of hypothetical relationships may be functionally characterized as:

\[
PDI = f(\text{AUTHORITY}, \text{CUSTOMER}, \text{MALES}, \text{PROFESSIONAL}, \text{SCENIC}, \text{MULTIPLE LANGUAGES})
\]

Since the Individualism Index (IND) may be contrasted with an opposite of collectivism, the depiction of authority figures is anticipated to be negatively associated with IND. A positive association between IND and picturesque website scenes might
also be expected. More individualistic societies have an enhanced focus on personal satisfaction and comfort, and a view of the mountains may be more likely to cause pleasurable feelings. Elderly people might be negatively associated with IND because in many collectively-oriented societies, the elderly are normally accorded a place of honor.

Representations of a higher power on a website may be negatively associated with IND because of its connotation of elitism. A highly individualistic society might consider images of office activity (Professional) as a connotation of elitism and, thus, be negatively associated with IND. To the extent that technical activity implies that the people engaged in the activity are better than others, a negative association might be expected with IND.

Thus, the second set of hypothesized relationships may be summarized as:

\[
IND = f(AUTHORITY^{(-)}, ELDERLY^{(-)}, HPower^{(-)}, SCENIC^{(+)}, PROFESSIONAL^{(+)}, TECHNICAL^{(-)})
\]

Hofstede has defined The Masculinity Index (MAS) in terms of its two poles: masculinity and femininity. The presence of males is expected to be negatively correlated with MAS because potential website users may feel in competition with the presented male figure. The same holds true with women depicted on the website. Since gambling represents an opportunity of receiving something for nothing for the website visitor, it might be expected to be positively associated with MAS.

The presence of images of elderly people and people other than males should be negatively associated with the masculinity index. Website color choice is anticipated to be strongly related to MAS and, in fact, less strongly associated with the other cultural
dimensions. A strong red and blue color scheme is expected to be significantly and positively associated with MAS.

The third set of hypothesized relationships may be summarized as:

$$MAS = f(PEOPLE, FEMALES, ELDERLY, GAMBLING, COLOR)$$

The last cultural dimension is the **Uncertainty Avoidance Index (UAI)**, which deals with a society’s acceptance of uncertainty and ambiguity. The inclusion of customer images was thought to enhance a customer’s feeling of familiarity with the bank, resulting in a positive association with UAI. Stated another way, customer images could increase the comfort level of uncertainty-avoiding individuals. Alternatively, if the presence of other individuals heightens the discomfort of individuals predisposed to avoiding uncertain situations, a negative relationship might occur between customers and UAI. If depiction of family images is particularly reassuring or comforting in those cultures tending to avoid uncertainty, a positive association with UAI might be expected. If children have a calming influence, the presence of children on a bank website could be positively associated with UAI. If cultures with high uncertainty avoidance also tend to have a focus on family, this variable might be positively associated with UAI.

Insofar as images associated with technology are able to reduce uncertainty associated with bank transactions, a positive association with UAI should result. If women are perceived as out of place in such a context, their presence on websites would be expected to be negatively associated with uncertainty avoidance. If customers are not familiar with a bank setting, images of professional activity taking place at the bank
might be positively associated with UAI. Gambling, inherently reflecting chance outcomes, should be negatively associated with UAI.

Thus the fourth and last set of hypothesized relationships to be examined may be characterized as:

\[
UAI = f(CUSTOMER, FEMALES, FAMILY, CHILDREN, GAMBLING, PROFESSIONAL)
\]

**Hypothesis Testing**

A correlation analysis was performed on all the independent variables against the four cultural dimensions to examine the full set of interrelationships. These are presented and discussed in Table 2 below.

Since the independent variables, other than Color, are all categorical variables (i.e., 1 or 0), ordinary least squares regression (OLS) is not appropriate. While ANOVA could be used, the model would be unbalanced, since the observations are not equally split between the two choices for all of the independent variables. Under the circumstances, the better choice is to use the generalized linear model (GLM) analysis. This was accomplished by applying the PROC GLM analysis in SAS on the four sets of hypotheses developed above. These are presented in Tables 3 through six and discussed below.
Findings

Table 2 presents the correlations for eight of the above website properties which were found to be correlated to one or more of the four cultural dimensions. These correlations suggest confirmation of 12 of the relationships hypothesized above.

Table 2: Bank Website Characteristics Correlation Analysis

<table>
<thead>
<tr>
<th>Website Characteristics</th>
<th>Percent of Banks with the Characteristic</th>
<th>Pearson Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>PDI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MAS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UAI</td>
</tr>
<tr>
<td>Customers</td>
<td>56.0%</td>
<td>0.12*</td>
</tr>
<tr>
<td>People Present</td>
<td>64.5%</td>
<td>-0.12*</td>
</tr>
<tr>
<td>Females present</td>
<td>51.7%</td>
<td>-0.16*</td>
</tr>
<tr>
<td>Professional environment</td>
<td>15.8%</td>
<td>0.15**</td>
</tr>
<tr>
<td>Technical environment</td>
<td>13.3%</td>
<td>-0.12*</td>
</tr>
<tr>
<td>Scenic environment</td>
<td>24.4%</td>
<td>-0.12*</td>
</tr>
<tr>
<td>Color</td>
<td>59.2%</td>
<td>0.12*</td>
</tr>
<tr>
<td>Multiple languages on site</td>
<td>42.3%</td>
<td>0.12*</td>
</tr>
</tbody>
</table>

* Correlations shown are significant the 10 percent level
** Correlations shown are significant the 5 percent level

Generalized Linear Model Regressions

The responsiveness of bank website form and content to the cultural dimension of Power Distance can be seen through the regression results in Table 3. Three variables are shown as significant. Except for the insignificant variable related to images of authority figures, the signs on all the variable coefficients are as hypothesized. The results confirm that images of professional activity are likely to be more effective in cultures that expect and accept large differences between the status of those at the bottom of the social order and those at the top.
Table 3: Power Distance Index (PDI) Model GLM Results

| Variable                  | Estimate | t-value | Probability > |t| |
|---------------------------|----------|---------|---------------|----|
| Authority                 | -1.6287  | -0.26   | 0.7956        |    |
| Customer                  | -8.0649  | -2.31** | 0.0221        |    |
| Males                     | 3.828    | 1.07    | 0.2868        |    |
| Professional environment  | 7.3952   | 2.07**  | 0.0395        |    |
| Scenic environment        | -5.4366  | -1.86*  | 0.0639        |    |
| Multiple languages at site| -3.2022  | -1.25   | 0.2115        |    |

** Significant at the 5% level
* Significant at the 10% level

Also consistent with hypotheses and in contrast, the presence of customers and scenic environments on websites appears to be more consistent with a leveling in social status and, thus, has resulted in a negative association between the appearance of these images and the Power Distance Index. These results suggest that the Hofstede cultural dimensions have been taken into account in formulating a banking website for local appeal, either intentionally or by unintended efforts to conform to the local culture.

Table 4 presents the regression results for the cultural dimension of Individualism (IND). Four variables are shown as significant. Again, while the sign on the variable Authority is not as hypothesized, it is also not statistically significant. With the additional exception of images of the elderly, the signs on the coefficients are as hypothesized. Significant at the 5% level, references to a higher power and the appearance of scenic backgrounds are as hypothesized. Thus, references to a higher power are judged to be less effective in cultures which are characterized by the belief that all individuals,
regardless of social status or economic wealth and power, have equal potential to be successful.

**Table 4: Individualism (IND) Index Model GLM Results**

| Variable                  | Estimate | t-value | Probability > |t| |
|---------------------------|----------|---------|---------------|---|
| Authority                 | 7.6944   | 0.88    | 0.3812        |   |
| Elderly                   | 14.9183  | 1.78*   | 0.0761        |   |
| Higher Power              | -18.3097 | -2.06** | 0.0401        |   |
| Professional environment  | -9.1167  | -1.83*  | 0.0688        |   |
| Technical environment     | -4.2692  | -0.8    | 0.4271        |   |
| Scenic environment        | 8.3721   | 2.04**  | 0.0421        |   |

** Significant at the 5% level
* Significant at the 10% level

These cultures are also fruitful opportunities to employ the universal appeal of scenic backgrounds to enhance customer comfort with the site. Similarly, in cultures where individualism has a high value, websites do not tend to show professional or technical environments, or use multiple languages. This is interpreted to reflect an understanding that professional or technical environments depict a circumstance in which individuals are inherently unequal, possibly through education, training and experience. References to a higher power were also expected to be negatively associated with IND because of its connotation of elitism.

An unanticipated result is the significant positive coefficient on the variable reporting the presence of images of the elderly on a website. A negative relationship was hypothesized with the thought that websites of high individualism cultures would be more likely to choose other images to enhance their universal appeal; and high collectivist (low IND) cultures would be more likely to show the elderly in recognition of
their cultural importance. This hypothesized relationship is thus shown to be incorrect. The cultural significance of the elderly should prove a fertile field for further research.

The results of the GLM analysis of the Masculinity Index appear in Table 5.

### Table 5: Masculinity Index (MAS) Model GLM Results

| Variable     | Estimate | t-value | Probability > |t| |
|--------------|----------|---------|---------------|---|
| People       | -7.9336  | -2.64***| 0.0088        |   |
| Females      | 1.964    | 0.69    | 0.4892        |   |
| Elderly      | 6.6807   | 1.35    | 0.1773        |   |
| Gambling     | 4.9681   | 0.69    | 0.4882        |   |
| Color        | 6.3938   | 2.40**  | 0.0173        |   |

*** Significant at the 1% level  
**  Significant at the 5% level

Only two variables are shown to be significant. The signs on the significant variables are as hypothesized. Interestingly, the signs on Female and Elderly were hypothesized as negative, but they turned out to be positive. This result may have occurred because the People coefficient was a sizable negative number and significant at the 1% level, perhaps swamping an otherwise negative relationship with MAS. The strong negative relationship with People indicates that images of men, women, children or the elderly are much less likely in masculine cultures. The coefficient on Gambling was not significant, although its sign was as expected.

It was hypothesized that bank websites in more masculine cultures would tend toward a red and blue color scheme, with color schemes in less masculine cultures tending toward earth colors, with green and tan being predominant. This is borne true as the website color scheme is related to the Masculinity Index at a 2% significance level. In fact, the impact of color choice in website composition is more highly related to MAS
than other cultural dimensions, as expected. In retrospect, and not statistically investigated, there also appeared to be an association between national flag colors and some website colors.

It is clear that banks have responded to variations in uncertainty avoidance in the local culture as seen in Table 6. Only two of six variables proved significant. The significant variables had coefficient signs as hypothesized.

### Table 6: Uncertainty Avoidance (UAI) Model GLM Results

| Variable                  | Estimate | t-value | Probability > |t| |
|---------------------------|----------|---------|---------------|-----|
| Customer                  | -1.0757  | -0.25   | 0.8011        |     |
| Females                   | -8.554   | -1.99** | 0.0479        |     |
| Children                  | 13.1878  | 2.18**  | 0.0307        |     |
| Family                    | -7.7814  | -1.24   | 0.2148        |     |
| Gambling                  | 9.7689   | 0.91    | 0.3637        |     |
| Professional environment  | -1.1232  | -0.26   | 0.7975        |     |

** Significant at the 5% level

Individuals may feel more comfortable or less comfortable with the unknown. While the coefficients for Customer, Females, Family and Professional Environment are all negative, only Female is significant at the five percent level. It would appear that in uncertainty avoiding cultures, women performing banking activities may be counter-traditional, and hence images of women on a website may not be an asset. The opposite is also likely true. In uncertainty accepting countries, such as the U.S., many women actively participate in banking affairs for personal, family or business reasons. Interestingly, images of children are positively and significantly related to UAI. Thus, in cultures with a high rating for uncertainty avoidance, banks tend not to include images of individuals other than children on their bank websites. One interpretation of the positive,
significant coefficient for Children is that children convey a sense of peace and security.

Conclusion

The continuing proliferation of online banking websites internationally has created an extraordinarily competitive situation, where banks are forced into a process of continually improving their websites, as technology advances and competition becomes fiercer. There is ample evidence that success in this endeavor is contingent upon responding to local business and cultural imperatives. It is not enough to build a better mousetrap, in terms of functionality. Banks must identify and meet or exceed customer needs and expectations at the most basic cultural level. Compared with typical manufacturing or services businesses, the problem is especially challenging for both indigenous and international banks because the activity takes place in an environment that not only spans national borders, but offers free information on practically anything, with instant access and response being the norm. In addition, communication networks are extensive and cut across traditional social and economic boundaries.

Given that banks are profit maximizing organizations intent on using their websites to capture a growing amount of banking business in the international arena, it appears that they have found that more effective websites can be created by taking into account cultural values with respect to individualism, power distance, masculinity, and uncertainty avoidance. While it is difficult to measure this response perfectly, it is clear from this study of 234 banks in 53 countries that banks do take these dimensions of culture into account.
The most important attributes of banking websites, as explained by cultural differences from country to country, appear to be (1) in the presence or absence of human images on the website, as well as the role and gender of those humans portrayed, and (2) and the type of environment (professional, technical, or scenic) depicted at the website.

It would seem that as competition for online banking services becomes ever more intense, as anticipated, the response of banks will be to increasingly take cognizance of local cultural values. Bank websites in different cultures will become increasingly localized as a result of the pressure to conform to indigenous cultural values. If the competition can be described as that between large banks with multiple operations across many borders and smaller indigenous banks, it is possible that the indigenous banks, being inherently more sensitive to local cultural values, may have considerable advantage over their international brethren.

As cultural values are not necessarily distributed evenly within a given country, banks may even find it beneficial to establish more than one within-country website, oriented along specific ethnic or sectarian lines. For example, we observed an English language banking website in a country dominated by Muslims that prominently featured wishes for a “Merry Christmas.” Successfully penetrating the online banking market cannot be accomplished by making the site more neutral and bland, but by enhancing the extent to which websites have targeted their intended market. To accomplish this successfully requires an awareness of the target population’s cultural values towards power distance, individualism, masculinity, and uncertainty avoidance.
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