

# Website Location Strategies Review Under Hofstede's Cultural Dimensions

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**Abstract.** With the rapidly development of Internet and e-commerce in recent years, broaden business into multicultural marketplaces is easier and more profitable, and an important step for a firm to exploit its new markets is to launch proper websites to communicate with customers in different areas. Culture is so diversified that the design strategies of website for different countries should be localized according to each culture. As a result, in this study, we will conduct a review based on the pervious scattered website localization design strategies and classify them into different cultural dimensions. Such classification can be a summary of the current studies on website localization, an indication for detecting future studies in this area, as well as a guideline for designing website in different cultures.

**Keywords:** Website localization · Hofstede's cultural dimension theory

## 1 Introduction

In recent years, geographical considerations have no longer been a major impediment to conduct business around the world, and marketers have new opportunities to extend their business globally and pursue larger profits in multicultural markets. According to eMarketer (2014) and Miglani (2012), the sales of global B2C e-commerce market have reached \$1.5 trillion in 2014, and more than 66 % of the world's online population have purchased online in 2014. The surge of the Internet users and the popularity of online shopping mode motivates marketers to consider corporate websites as a valuable media to communicate with their customers. It has been proved that any delay in launching international websites might be a fatal mistake for a corporation (Alvarez et al. 1998).

An attractive, easy to use and user-friendly interface of website is vital to keep consumers on the site long enough to make decision without switching to another site (Nassar and Abdou 2013). As a result, the design of firm's international websites is

quite vital and various questions are coming along: should the designs of web sites in different cultures be distinct or should they follow similar trends? How do different cultures represent themselves on the Web? If cultural differences are found, what role do they play and how to adapt them to such differences? and so on. The origin of these problems is that different culture-background consumers have different product/brand knowledge structures, as well as different perceptions of and preferences for the products (Keller et al. 2011). Thus, only language translation in international websites is doomed to impede brand building process and a successful international website needs more respect to local culture.

In previous research, such operation by using international website strategies to adapt and respect to local culture is called “website localization” (Jain 1989), and ample studies have already demonstrated that proper website localization can improve customers’ impression of websites (Badre 2001), increase their willingness to visit the websites (Badre 2001), enable the websites to increase their hit rate by almost 2000 % (Tixier 2005), simplify the navigation and promote favorable attitudes toward the website (Luna et al. 2002), as well as enhance the trust of online shopping customers (Singh and Boughton 2005). Another research by Tixier (2005) also shows that, through effective website localization, a firm could increase its online sales by 200 %.

However, practically, current operations on cultural adaptation in website localization areas are far from enough. A survey of the top 900 companies websites listed by Forbes reveals that only 225 of these companies have built localized websites (Singh and Boughton 2005). Similar research by Forrester finds that 67 % of the Fortune 100 companies’ use standardized but not localized websites, in which English is the only language. Besides, although some international firms’ websites have already adapted to local language and contents, the adaptation is still very limited with simply uniform website designs and features (Card et al. 1996).

Insufficient and inadequate website localization guidance may be part of reasons for the operation deficiency. Besides, improper website localization strategies are not only ineffective but also wasting money. Thus, firms can benefit a lot if some criterions can be developed to direct their international website designs. However, previous research which investigate the effect of website localization strategies are often too scattered to be used as the guideline by firms. Inspired by this vacancy, we conduct a review to all the website localization strategies, as well as classify each strategy into different dimensions of Hofstede’s cultural theory.

The paper proceeds as follows. Section 2 introduces Hofstede’s cultural theory, which is used as the framework for summarizing website localization strategies in this research; Sect. 3 reviews previous studied website localization strategies and classify them into different cultural dimensions accordingly; Sect. 4 is used to analyze and detect the insufficient of current research on website localization strategies and concludes the research with the theoretical and practical contributions.

## 2 Literature Review

The flourishing of the Internet and e-commerce has introduced a new research area, website localization, in marketing and information system areas, and increasing studies are conducted to investigate the effectiveness and importance of website localization. For example, Singh et al. (2006) use a technology acceptance model to study the B2C international websites of several countries, and empirically prove that cultural adaptation of Web content can increase purchase intentions significantly and lead to favorable attitudes towards a website. Besides, Sia et al. (2009) compare the application of two website strategies across Australia and Hong Kong, proving that web strategies can affect customers' trust online. Additionally, Badre (2001) surveys people with two different genres, e-shopping and news sites on the World Wide Web, and investigates their preferences and performance as a function of Web cultural experience.

Admittedly, as the service channels and mediums to serve their customers, firms' websites should not be culturally neutral, but be full of cultural markers (Singh and Boughton 2005). As a result, previous analysis and investigation for website localization strategies are always based on various kinds of cultural topology. The first category is the single-dimension national culture classification model. This model includes high versus low context (Hall and Hall 1987), monochronic versus polychronic (Lewis 1992), and high versus low trust (Fukuyama 1995). Another stream of national culture classification models is the multiple-dimension models, such as two-dimension categorizations (Lessem and Neubauer 1994), Newman five-dimensional classification, and (Trompenaars and Hampden-Turner 1994) seven-dimension models.

Among these studies, Hofstede's cultural theory is one of the most extensively applied and validated theories in cultural context and management research (Singh et al. 2005). Hofstede's cultural theory is developed by Geert Hofstede (Singh et al. 2005), and it describes the effects of a society's culture on the values of its members and how these values relate to their behaviors. Initially, Hofstede's cultural theory provides four categories to understand how national culture relates to social psychological phenomena, and the four categories are Power Distance Index (PDI), Individualism verse Collectivism (IDV), Uncertainty Avoidance Index (UAI), and Masculinity verse Femininity (MAS). The conclusion is based on a survey research conducted between 1967 and 1978 at foreign subsidiaries of IBM. In 1991, Long-Term Orientation (LTO) is added as a new dimension to upgrade Hofstede's cultural theory.

Despite some critiques of Hofstede's cultural dimensions regarding the methodology and context (Fernandez et al. 1997; Huo and Randall 1991), significant more empirical evidence has verified that Hofstede's cultural typology is a valid differentiator to detect cultural differences and an effective basis for the analysis of regional differences (Bochner 1994; Dorfman and Howell 1988; Søndergaard 1994; Simon 2000). In addition, in 1987, the Chinese Culture Connection conduct a 40-item cultural value survey which is based on the themes identified by Chinese social scientists and

philosophers, and results show that three out of four dimensions are highly correlated with Hofstede's cultural dimension index. As a result, in this study we use Hofstede's cultural dimension theory as a framework to conduct the website strategies review, and each strategy is categorized into one cultural dimension depending on its effect is mainly impacted by the differences across culture in which cultural dimension.

### 3 Website Strategies Review

We focus on the review of the studies investigating website localization strategies during the latest 15 years (2000–2015) in both marketing and information system areas.

#### 3.1 PDI-Classified Web Strategies

The first dimension in Hofstede's cultural dimension theory is PDI which is defined as "the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally" (Hofstede 1980). A country (e.g., China or Japan) with high PDI indicates that hierarchy in this country is clearly established in society without doubt. Conversely, in country (e.g., Canada, the US or Germany) with low PDI, people tend to question authority and attempt to distribute power.

Firstly, Power Distance would be more involved with the presence of authority (Robbins and Stylianou 2002) and status (Mueller 1987), that is because the character of admiring power in such countries. Correspondingly, pride of ownership appeal and quality assurance gain more favor in such countries. In the research, web strategies will be classified into high-PDI category if they are more preferred by people value society hierarchy, and reversely be sorted into low power Distance category if they are more appreciated by people who tend to question authority. Web-specific cultural traits in previous research on PDI categories are summarized in Table 1.

#### 3.2 IDV-Classified Web Strategies

The second category is IDV, which explores the "degree to which people in a society are integrated into groups (Hofstede 1980a)", and this category focuses on the individual's relationships with others (Hofstede 1991). In a collectivist society (e.g., Brazil, China, Egypt, India, Japan, and Mexico), individuals are presumed to value the interest of their group more than that of themselves. As a results, collectivists will display greater group loyalty and are ready to protect the interests of group members. On the other hand, people in a individualism society (e.g., Australia, Canada, Denmark, France, Ireland or the US) are expected to care primarily for themselves and their immediate families. Individualists will be relatively less pressured from others and tend to be more self-centered.

**Table 1.** PDI-classified web strategies

High-PDI	Low- PDI	Studies
Symmetrical home page	Asymmetrical home page	Callahan (2005), Marcus and Gould (2000)
Frequency of logos		Callahan (2005)
Frequency of images of faculty		Callahan (2005)
	Frequency of images of students	Callahan (2005), Marcus and Gould (2000)
Tall hierarchies	Shallow hierarchies	Marcus and Gould (2000)
Official seal, national emblems		Marcus and Gould (2000)
Photographs of leaders	Images of both gender	Marcus and Gould (2000)
Monumental buildings	Images of people	Callahan (2005), Ackerman (2002)
Company hierarchy information		Singh et al. (2003)
Pictures of awards		Singh et al. (2003)
Pictures and information of CEOs		Singh et al. (2003)
Group identity symbols in newsletter		Singh et al. (2003)
Theme of family		Mueller (1987)
Links to local websites		Mueller (1987)

Website strategies are classified into IDV category if they affect very differently between individualistic persons and collectivistic ones. Specially, in one hand, website strategies are categorized into collectivistic items when they are more preferred by people who value group interests as well as the endorsement from others. In another hand, ones classified into individualistic category appreciate more on personal interests (Table 2).

### 3.3 UAI-Classified Web Strategies

UAI, the third dimension in Hofstede’s cultural theory, is defined as “a society’s tolerance for ambiguity (Hofstede 1980b)”, and it is mainly used to deal with how societies accommodate high levels of uncertainty and ambiguity in the environment (Hofstede 1984; Tricker 1988). Specifically, society (e.g., Japan) with a high UAI has stiff codes of behavior, guidelines, and laws, and people in such country tend to absolute rely on widely accepted truth or belief. In addition, such people also seek to avoid ambiguity and therefore develop rituals and rules for virtually every possible situation. On the contrary, persons from a low UAI culture (e.g., Canada, Denmark,

**Table 2.** IDV-Classified web strategies

Individualistic	Collectivistic	Studies
Images of groups	Images of individuals	Callahan (2005), Marcus and Gould (2000)
Young individuals	Older individuals	Callahan (2005)
Number of links	Figurative images	Callahan (2005)
High modality pictures	Low modality pictures	Callahan (2005)
	Pictures of women	Callahan (2005)
	Animated pictures	Callahan (2005)
Country specific news		Singh et al. (2003)
Newsletter		Singh et al. (2003)
Symbols of national identity		Singh et al. (2003)
Pictures of family		Singh et al. (2003)
Links to local websites		Singh et al. (2003)
Customer endorsement		Singh et al. (2003)
Portal affiliation		Singh et al. (2003)
Clubs/Chat rooms		Singh et al. (2003)

England, Hong Kong, Sweden, or the US) might be more reflective and relatively broad-minded, resulting in the reduction of the need in them for social approval.

In our study, web-special traits belonging to the UAI dimension when their effects are vary significantly in different UAI countries. In particular, the application of the high-UAI strategies will work on alleviating customers' uncertainty level when using the websites, and vice-versa. The detailed website strategies on UAI-classified category are reviewed in Table 3.

**Table 3.** UAI-classified web strategies

High-UAI	Low-UAI	Studies
Guided navigation		Singh et al. (2003)
Tradition theme		Singh et al. (2003)
Free trials or downloads		Singh et al. (2003)
Limited choices	Variety of choices	Marcus and Gould (2000)
Restricted amounts of data	Long pages with scrolling	Marcus and Gould (2000)
Limited scrolling	Abstract images	Marcus and Gould (2000)
References to daily life		Ackerman (2002)
Redundancy		Ackerman (2002)
	Frequency of abstract images	Callahan (2005)
	Number of links	Callahan (2005)
Frequency of horizontal pages		Callahan (2005)

### 3.4 MAS-Classified Web Strategies

The fourth dimension is MAS, which is grounded in the ways sex roles are allocated in the culture (Hofstede 1991). In this dimension, masculinity is defined as “a preference in society for achievement, heroism, assertiveness, and material rewards for success”, and its counterpart, femininity, represents a preference for cooperation, modesty, caring for the weak, and quality of life (Hofstede 1980b). Country (e.g., Denmark, Finland Netherlands, Norway, or Sweden) is categorized to the dimension of “femininity” when it minimizes the distinctions between sex roles, or emphasize the quality of life. Instead, other countries (e.g., Austria, Italy, Japan, Mexico, and Brazil) which maximize the distinctions between the sex roles and highlight the quantity of life, are labeled “masculinity”. Individuals from masculine cultures will value material success and assertiveness, and they may seek to respond in a manner that compliments their own ambitions.

Masculinity and Femininity society persons generally have different preferences towards website designs. For example, Tsikrikis (2002) finds that masculinity is associated with higher expectations on a website interactivity, and Pollay (1983) proposes that ads in masculine cultures emphasize on the level of enjoyment. More studies on this category are summaries in Table 4.

**Table 4.** MAS-classified web strategies

Masculinity	Femininity	Studies
Quizzes and games		Singh et al. (2003)
Realism theme		Singh et al. (2003)
Interactivity		Pollay (1983)
Limited choices	Multiple choices	Ackerman (2002)
Orientation towards goals	Orientation toward relationships	Dormann and Chisalita (2002)
Emphasis on tradition and authority		Dormann and Chisalita (2002)
Frequent images of buildings	Frequent images of people, especially showing them laughing, talking or studying together	Dormann and Chisalita (2002)
Utilitarian-purposed graphics		Dormann and Chisalita (2002)
Number of links		Callahan (2005)
	Frequency of figurative images	Callahan (2005)
High modality pictures	Low modality pictures	Callahan (2005)
Number of pictures of women		Callahan (2005)
Frequency of animated pictures		Callahan (2005)
Website interactivity		

### 3.5 LTO-Classified Web Strategies

The last category in Hofstede's cultural theory is LTO, which acknowledges the connection of the past with current and future connection/challenges (Hofstede 1991). Strategic and financial caution are highly prized by persons who exhibit a long-term orientation (Hofstede 1991). Individuals from the societies (e.g., Pakistan and Mexico) with a short-term orientation may be more forthright and explicit in their interactions with others. Conversely, those in the societies (e.g., China and Japan) with a high degree of LTO view adaptation, circumstantial behaviors, and pragmatic problem solving as a necessity. Such people will be posited to place great significance on the values of thrift, persistence, and long-term alliances.

However, few research are based on long/short-term orientation to analyze web-special traits, and previous research only simply mentioned that long-term orientation would be indicated by the presence or lack of a search engine, site map, FAQ, corporate history, etc.

## 4 Review Analysis

According to the cultural dimension index listed in Item International (<http://geert-hofstede.com/about-us.html>) which is endorsement of Professor Geert Hofstede, we calculate the average of the five dimension indexes (Table 5) in different locations

**Table 5.** Cultural dimension index in different locations

Nation	Average PDI	Average IDV	Average MAS	Average UAI	Average LTO
Africa	66.6	33.6	48.7	66.8	41.8
Australia	32.8	84.5	49.8	47.0	43.0
Central America	70.2	25.6	46.4	64.2	43.3
Middle East	69.1	31.3	47.8	66.5	41.7
Japan & Korea	72.7	28.7	50.9	65.0	37.4
Middle Euro	38.0	64.3	74.7	75.3	62.7
South America	71.1	25.8	50.8	67.5	37.9
North America	62.5	40.1	49.8	65.8	43.4
North Euro	63.7	37.8	48.3	65.9	43.9
Southeast Asia	69.3	30.5	47.6	65.7	41.0
Volkswagen China	70.0	20.6	45.7	58.1	51.3
West Euro	62.0	39.8	48.6	65.3	44.7



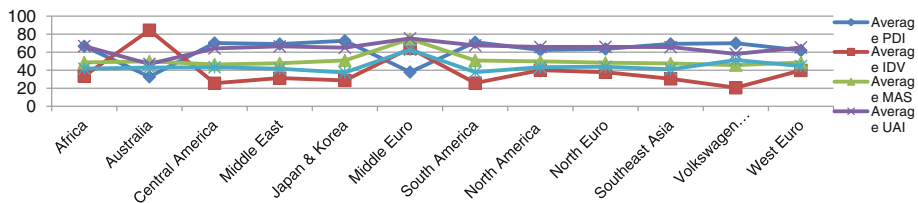


Fig. 1. Cultural dimension fluctuation across different locations

Table 6. Statistics analysis in cultural dimension index in different locations

_STAT_	N	MIN	MAX	MEAN	STD	Q1	MEDIAN	Q3
Average PDI	12	32.8	72.7	62.33333	13.08659	62.25	67.85	70.1
Average IDV	12	20.6	84.5	38.55	18.26659	27.25	32.45	39.95
Average MAS	12	45.7	74.7	50.75833	7.706603	47.7	48.65	50.3
Average UAI	12	47	75.3	64.425	6.661576	64.6	65.75	66.65
Average LTO	12	37.4	62.7	44.34167	6.767765	41.35	43.15	44.3

around the world, and the statistical analysis in Table 6 shows its fluctuated trend. IDV and PDI are the two most significantly fluctuated dimensions across locations around the world. As a result, when designing international website strategies, if companies pay more attention on the IDV- and PID-classified website strategies, the effect of their operation can be more obvious. In addition, Fig. 1 tends to give a more visualized description for the fluctuation of different cultural dimensions across different locations in the world.

## 5 Conclusion

In this research, we conduct a review on previous investigated website localization strategies, and this review is encouraged by the low level of comprehensiveness in studies in this area. The review is aimed at providing a general guideline for website designers and marketers when they want to build international websites in multi-countries.

Practically, if a country has specially characters in a certain dimension (with a relative high/low index value) and firms want to locate their website into such country, they can refer to the corresponding website localization strategies in this study and try to build more outstanding designs on them. Particularly, among all the Hofstede’s cultural dimensions, IDV is the one which varies most across countries around the world, and the next fluctuated one is PDI. As a result, in practical international website

design process, if marketers pay more attention on the cultural traits in these two dimensions, and the designs will be more effectual.

## 6 Future Research

This study relied exclusively on Hofstede's typology of culture, which is one of the most widely accepted and frequently cited cultural theories. However, the use of Hofstede's clusters, did not allow us to classify some web-special traits in content parts (e.g., hard sell approach and explicit comparisons). Future research may benefit from the use of some new typology. In addition, few research analyze web-special traits based on LTO dimension, so in the further this category could be further investigated.

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