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Abstract

Country-of-Origin (COO) is a very important factor in decision making of consumers. When consumers identify themselves with products from some specific countries, they will subjectively accept products from these countries that are much better than those from other countries, though you might never hear of the products. These consumers' behaviors might be considered irrational but is a very common phenomenon. According to the papers on the effect of country-of-origin, this situation might imply the consumers' worship of national culture where the products came from. As long as consumers use products with stronger cognition of one national culture, they will be much more confident of the quality of the products. In the meantime, using these products might enhance consumers' individual worthy.

This study is based on the national culture dimension of Hofstede and scores for countries in his research. And we propose two propositions from "national culture" to figure out the global marketing strategies of personal computer (PC) industry. This paper could predict PC companies' future strategic direction with national cultural dimensions. Practically, the findings of this study could offer more references for other industries of Taiwan in make global marketing strategies.

Keywords: Country-of-Origin, National Culture, Global Marketing Strategies

Introduction

Since the nation can create and continue the competitive conditions of enterprises, Poter (1996) believes the nation is the basic of enterprise competitive advantages. Nations not only influence decisions made by enterprises, but also the core of creating and enhancing production technical developments. Therefore, Ho (2005) who is the president of HP Taiwan said : "Once Lenovo which is a PC brand of Mainland China merges the PC department of IBM Mainland China, IBM is no longer USA product," and she declared that she wants to make Lenovo not even think about the best sales of PC and notebook of foreign business. Furthermore, Ho (2005) emphasized that only the brand of HP pulses Compaq is original USA product after merging, so she expects all distributors to be wise and choose HP if they want to buy original USA products.

In view of this, Shih (2000) who the ex-president of *acer* believes the images of USA enterprises in USA are almost equal to these in global, so globalization is much easier to USA companies compared with other countries. Even Japanese companies are fail to get in the US market. Since USA brands are powerful, HP tends to win the first prize of USA PC brand. Foreign products are hard to have touchdowns in the US market, even the first European PC brand and *acer* which is the fourth PC brand of universe are included (Xiao & Hwang 2006).

Han (1989) found that consumers always infer the quality of products from its origin country image, so Country-of-Origin (COO) influences consumers' product attribute appraisals. Olson and Jacoby (1972) believe consumers usually infer the product quality from the outer clues like brand names and origin country and so on. According to the study of Han and Qualls (1985), origin country indeed influences consumer's appraisal when buying less famous television brand. These studies result concluded that product quality appraisals of consumers are effected by not only the brands (Han & Terpstra 1988) but also the origin countries (Tse & Gorn 1993), so there is really a close relation between COO and product brands.

Schooler (1971) investigated how do USA consumers feel about the images of foreign products and found that the product image of West German was superior to others from India, West-Europe, and Asia. Therefore, the concept of biases, which is the bias product appraisal of different countries according to consumer' perceived of origin country, is formed already. Johansson and Nebenzahl (1986) found that product brands from developed countries can increase the degree of consumer favor. Wall et al. (1991) think there are interactions between brands and origin countries, and consumers have good appraisals to unknown brands only when the brands are from high reputation origin countries. And many studies support that consumers do have good impressions on the products from developed countries (Cordell 1992; Wang & Lamb 1983; Gaedeke 1973; Schooler 1971).

Cordell (1992) investigated the USA clients' favors to origin country cultures and found that the USA clients prefer the developed countries to non-developed ones. Also, some scholars found that consumers not only have negative appraisals to non-developed and conservative politic countries but also to the products from those countries (Anderson & Cunningham 1972). Despite the positive relation between the national image and the degree of national economic development, Bilkey and Nes (1982) argue that there are many factors could lead into biases as well, including the politic circumstances and the culture backgrounds of manufacture countries and so on, and all these factors could influence consumers' perceived of manufacture country image. According to the study of Wang and Lamb (1983), the level of economic development, the classification of political climates, and the culture range indeed have significant effects on consumers' choices when buying foreign products. In summary, national cultures influence products, which means some specific national cultures enable their products to be accepted easily, but some specific national cultures enable their products to be accepted hardly instead.

The trend of globalization broke the limitations of structures, areas, and functions built by space, time, culture, and human society. As the coming of globalization society, we need not only a whole new set of thinking and organizing, but also need to understand the importance of power relations among the thoughts, actions, knowledge, structures, and processes (Kofman & Youngs 1996). Therefore, Gupta and Govindarajan (1997) consider that an enterprise with successful globalization must take national culture as an important competitive factor. In the meanwhile of chasing internationalization, regardless of a set of integrating information systems and aiding globalization administrative strategy, an administrative system with globalization is required. Because of the society of Chinese is much human-governed: prefer is the first priority; advantage is the second one; right or wrong is the third one, but the priority in the Western society is in reverse order, that is why Chinese enterprises can hardly reach the goal of globalization (Wu 2006). Terry Kuo, the present leader of transnational enterprise in Taiwan, also believes that the essential factor of internationalization and globalization is culture, because human and culture are always unchanged operative key points over the world (Wu 2006).

Since country-of-origin (COO) has effect on consumer's product acceptance, consumer accepts the products from developed countries more easily. And the cultural diffusion also makes non-developed countries accept cultures from developed countries much easier (Pharr 2005). Therefore, Cheng (2003) believes that the culture diffusion is a very important factor to enable culture keep on updating and changing. Nevertheless, the culture diffusion is not in balance but an unequal phenomenon. Especially, the cultural diffusions of developed countries which possess the basics of grand country power and

well-developed science technology are spreading faster than developing and non-developed countries which only can accept the information provided by developed countries without any resistance. And this kind of cultural diffusion is quite familiar with the circumstance that brands of developed countries are accepted easier.

In summary of above literature reviews, the relationship between the country-of-origin (COO) and the national culture is very close, so this study speculates that the national culture has diffuse effect on its products, which means the diffuse effect enable the consumer of developing and non-developed countries have good impressions on the products and brands of developed countries. Hence, this study investigates the relation between PC industry and national culture from a national culture perspective. In order to examine the national culture and compare the different cultures between different countries, this study adopts the well-established Dimensions of National Cultures developed by Hofstede to analyze the data.

Curiously however, how does Country-of-Origin influence the brands? And are there any different influence degrees between the high CFO and the low one? These issues are worthy to investigate further. Though Taiwan presently builds an image of a grand computer manufacture country within ODM (Original Design Manufacturer) and OEM (Original Equipment Manufacturer), as the consequence of cut-throat competition, the profits of OEM and ODM are lesser and lesser. Therefore, Taiwan OEMs realize the importance of brands to enterprise livings and developments. Since the demand market of OEM and ODM in Taiwan can't satisfy the needs of Taiwan OEM suppliers, exportation seems to be the only way to solve the problem. And how to spread the marketing ability of Taiwan brands internationally within this circumstance could be an alternative strategic direction.

In order to understand different cultural values and thoughts, Hofstede (1991) dispatched the attitude measure survey to 116,000 IBM employees in 72 countries. Then he analyzed out 53 kinds of cultures and compared the differences with each other with national cultures dimension. Hence, the value of Hofstede' research is not only the mass of research sample (McSweeney, 2002) but also the independent investigation of each cultural factor since the sample he chosen were in the same company and at same position but from different cultures.

The research objects in this study are well-known PC brand manufacturers, and we try to comprehend how national cultures influence PC manufacturer brands. The research objects of the national culture dimension of Hofstede were surveyed (marketing-plus-sales) employees in global branches of IBM which is an international famous PC brand manufacturer. Because IBM is one of the Top 10 international PC brand manufacturers and is one of the objects of PC manufacturers in this study, so it seams quite suitable to use the national culture dimension of Hofstede to analyze the impacts of national cultures on PC manufacture brands in this study.

For this reason, this study viewed the issue from the relation between the transnational brand and the national culture and applied Dimensions of National Cultures proposed by Hofstede (1991) to analyze the relation. Moreover, this study expects to understand the role of national culture when the PC business promotes its brand internationally and to provide specific analyses and suggestions of building brands and advancing international market to other businesses in Taiwan.

Theory: the national culture dimension of Hofstede

The national culture dimension of Hofstede separate the culture into five major constructs:

(1) Power distance: Power distance is the reaction of a nation treats the unequal power circumstances between members. In another word, power distance is the degree of a society accepts unequal power distributions and is presented by power distance index (PDI). High power distance societies have the phenomenon of centralizations and put emphasis on traditions, authorities, and social class. On the other hand, in the low power distance societies, and the subordinates depend on their superiors limitedly and the relationship between both is more independent.

(2) Individualism/collectivism: In the national cultures, individualism/collectivism is the relationship between individual role and group role and is presented by individualism index (IDV), therefore, high scores of IDV presents individualism. The social structure is called collectivist when the group benefit is more important than personal benefit, one the contrary, the social structure is called individualist. In collectivist society, people take the interpersonal relationship seriously, and define themselves by the family, group, and organization they belong to, try to exchange the protections from these groups with their sincerely loyalties. In addition, individualism is a self-conceptual idea which emphasizes heroism and individual action, so most of people are pursuit of personal and family benefits and believe they can independent from any groups and organizations to define themselves by individual accomplishment.

(3) Uncertainty avoidance: Uncertainty avoidance is the degree of major people in a country who tend to deal with uncertain and unexpected events by normal and specific activities, so this dimension measures the fuzzy tolerance of society with uncertainty avoidance index (UAI). Hofstede pointed out that decrease the uncertainty could make people feel at ease. Therefore, the country with strong uncertainty avoidance is anxious when facing changes, but the country with weak uncertainty avoidance is more comfortable with uncertain environments.

(4) Masculinity/Femininity: Masculinity/Femininity is presented by masculinity index (MAS), which means the different distributed degree of gender roles and expectations of different countries. The society with Masculinity emphasizes

the traditional concept of man's domain, such as all social activities should be participated by men, and men should pay attentions on their autonomies, control abilities, and leading authorities. In addition, these aggressive ideas, including making money and promotion, are emphasized in organizations with Masculinity. But the society with Femininity puts emphasis on raising, peace, joy, and atmosphere, the working environment, grace, and sympathy are took seriously in organizations.

(5) Long-term/short-term orientation: It related to human life of long-term or short-term orientation and is presented by long-term orientation (LTO). At the long-term orientation, the following four values are presented: (A) Adherence. (B) Put emphasis on the priority of positions. (C) Frugality. (D) Shame. On the other hand, at the short-term orientation, the following four values are presented: (A) Personal stability and security. (B) Face saver. (C) Respect traditions. (D) Return favors and gifts. Because these values related to the guidelines of Confucianism, Hofstede and Bond (1984) called this dimension as "Confucian." In addition, the value of long-term is future orientation and more dynamic, and the value of short-term which related to the past and present is more static.

Meta-Analysis Research Method

Meta-analysis research method collect a large number of related data and use the methods of narrative or statistic analysis, and expect to get a reliable conclusion. This study collects PC market share data of many areas, including USA, Japan, Taiwan, and Mainland China. Because the data related to some business secrets, so it is hard to get complete data. But the organizations that provide data to us are well-established, so the data is reliable as well.

This paper based on the narrative method of mata-analysis by Hunter and Schmidt (1990). The analyze data came from International Data Corp (IDC) and Gartner. Due to: (1) IDC is the pioneer information analysis and consult institute of global IT industry. It is the first institute has professional evaluate and intensive analysis for global IT industry research. IDC assist customers attain IT and e-commerce's data and suggestions which can be important reference for their strategic business planning and development. In addition, IDC has over 700 analysts in the global analyst team and the service items including 500 kinds detail analysis data and report of global market per year. At the same time, IDC is the most reliable data source of Wall Street economic institute in order to the accuracy and immediacy of these data (Taiwan IDC website, 2005). (2) Gartner was established in 1979, it has 3,700 employees in global 75 countries, it provides IT related report to customers. Each day Gartner service over 10,000 organizations, the top managers' decision of private company and public agency used Gartner data (Gartner, 2006).

Due to this study focus on the Global Marketing Strategies of Taiwan's Personal Computer Industry and the top three PC market in the world is USA, Mainland China and Japan, than we select USA, Mainland China, Japan and Taiwan four countries data be analyzed. In light of this, data of International Data Corp (IDC) and Gartner between 2001 to 2005, and analyzed the PC market share reports of USA, Mainland China, Taiwan and Japan to decrease the bias as possible as we could.

In addition, this study tries to investigate the relation of national cultures and PC brands through analyzing the scores of national cultures dimensions of Hofstede in each country. Finally, according to the PC brand market share and the national culture dimension scores of Hofstede, proposed two propositions to get the conclusions of this study.

Findings, Analysis and Discussions

Global market share analysis of PCc manufacturer brands from national cultures

Table 1 presents the sales records of each international PC brands from 2001 to 2005. **(1)In 2001:** There were 4 USA brands, 4 Japanese brands, 1 Taiwanese brand, and 1 Chinese brand in the Top 10 PC brands. If we distribute them by nations, the market share of USA is 28.4%**,** the market share of Japan is 13.1%, the market share of Taiwan is 2.7%, and the market share of Mainland China is 2.0%. **(2) In 2002:** There were 3 USA brands and 2 Japanese brands in the Top 5 PC brands, and the market share of each is 32.6% and 6.6%. **(3) In 2003:** There were 3 USA brands and 2 Japanese brands in the Top 5 PC

brands, and the market share of each is 34.4% and 6.7%. **(4) In 2004:** There were 5 USA brands, 3 Japanese brands, 1 Taiwanese brand, and 1 Chinese brand in the Top 10 PC brands. And the market share of USA is 43.8%**,** the market share of Japan is 10.1%, the market share of Taiwan is3.6%, and the market share of Mainland China is 2.0%. **(5) In 2005:** There were 2 USA brands, 1 Japanese brand, 1 Taiwanese brand, and 1 Chinese brand in the Top 5 PC brands, and the market share of each is 31.3%, 3.8%, 4.6%, and 6.9%.

Table 1: Rank and Distribution of Global PC Brands (Based on Brand Market Share %)

Rank / Year	1	2	3	4	5	6	7	8	9	10
2001 Note 1	Dell (12.9)	HP (6.9)	IBM (6.2)	Siemens-Fujitsu (4.5)	NEC (3.5)	Toshiba (2.9)	*acer* (2.7)	Apple (2.4)	Sony (2.2)	Lenovo (2.0)
2002 Note 2	HP (14.2)	Dell (13.2)	IBM (5.2)	Siemens-Fujitsu (3.8)	Toshiba (2.8)					
2003 Note 2	Dell (15.0)	HP (14.3)	IBM (5.1)	Siemens-Fujitsu (3.8)	Toshiba (2.9)					
2004 Note 1	Dell (17.8)	HP (15.8)	IBM (5.9)	Siemens-Fujitsu (4.0)	*acer* (3.6)	Toshiba (3.4)	NEC (2.7)	Lenovo (2.0)	Apple (2.4)	Gateway (1.9)
2005 Note 3	Dell (16.8)	HP (14.5)	Lenovo (6.9)	*acer* (4.6)	Siemens-Fujitsu (3.8)					

Note 1: DigiTimes.com.tw (2005); Note 2: Gartner (2004); Note 3: Beijing Daily News (2006)

According to the data above, from 2001 to 2004, there is a trend of PC brands: The number of USA brands is equal or more than the number of Japanese brands, the number of Japanese brands is more than the numbers of Taiwanese brands and Chinese brands, and the number of Taiwanese brands is equal to the number of Chinese brands. In addition, we can tell a manifest obvious trend from the global PC market share from 2001 to 2004: the market share of USA brands is more than the market share of Japanese brands, the market share of Japanese brands is more than the market share of Taiwanese brands, and the market share of Taiwanese brands is more than the market share of Chinese brands. But there were something changed in 2005, because the Chinese PC brand Lenovo merged the USA PC brand IBM, the PC market share of Lenovo which is Chinese brand became the 3rd of international, and this was also the first time that the market share of Chinese PC brand was more than the market share of Taiwanese brand, *acer*.

Table 2: The Relationship among PC Brand Number, Market share, and National Cultures

The PC brand rank of 2001 distributed by nations (Rank; Market share) Note 1	**USA** (**4**; 28.4%)	**Japan** (**4**; 13.1%)	**Taiwan** (**1**; 2.7%)	**Mainland China** (**1**; 2.0%)
The PC brand rank of 2002 distributed by nations (Rank; Market share) Note 2	**USA** (**3**; 32.6%)	**Japan** (**2**; 6.6%)	**Taiwan** (np)	**Mainland China** (np)
The PC brand rank of 2003 distributed by nations (Rank; Market share) Note 2	**USA** (**3**; 34.4%)	**Japan** (**2**; 6.7%)	**Taiwan** (np)	**Mainland China** (np)
The PC brand rank of 2004 distributed by nations (Rank; Market share) Note 1	**USA** (**5**; 43.8%)	**Japan** (**3**; 10.1%)	**Taiwan** (**1**; 3.6%)	**Mainland China** (**1**; 2.0%)
The PC brand rank of 2005 distributed by nations (Rank; Market share) Note 3	**USA** (**2**; 31.3%)	**Japan** (**1**; 3.8%)	**Taiwan** (**1**; 4.6%)	**Mainland China** (**1**; 6.9%)
Power Distance Index, PDI	**USA** (40)	**Japan** (54)	**Taiwan** (58)	**Mainland China** (80)
Individualism Index, IDV	**Taiwan** (17)	**Mainland China** (20)	**Japan** (46)	**USA** (91)
Uncertainty Avoidance Index, UAI	Mainland China (40)	USA (46)	Taiwan (69)	Japan (92)
Masculinity Index, MAS	Taiwan (45)	USA (62)	Mainland China (66)	Japan (95)
long-term orientation, LTO	**USA** (29)	**Japan** (80)	**Taiwan** (87)	**Mainland China** (118)

Note 1: DigiTimes.com.tw (2005); Note2: Gartner (2004); Note 3: Beijing Daily News (2006)

Meanwhile, according to the national culture dimension scores of Hofstede, this study scored Taiwan, Mainland China, Japan, and USA in order with following indexes: power distance index (PDI), individualism index (IDV), uncertainty avoidance index (UAI), masculinity index (MAS), and long-term orientation (LTO), and the result of scoring are: **(1) Taiwan:** PDI: 58; IDV: 17; UAI: 45; MAS: 69; LTO: 87. **(2)Mainland China:** PDI: 80; IDV: 20; UAI: 66; MAS: 40; LTO: 118.

(3)Japan: PDI: 54; IDV: 46; UAI: 95; MAS: 92; LTO 80. **(4)USA:** PDI: 40; IDV: 91; UAI: 62; MAS: 46; LTO: 29. Table 2 presents the results of the national scores and the rank of the Top 10 PC brand numbers. Therefore, this study found that:

National cultures has relationship with the number and market share of PC brands

If we use nation as the measure unit in PC brands, the brand number and global market share has negatively relationship with the scores of power distance index (PDI) and long-term orientation index (LTO), and has positively relationship with the scores of individualism index (IDV), which means the nation with high scores of PDI and LTO, and low scores of IDV has less numbers of PC brand and low rank of PC market share, such as Mainland China and Taiwan. On the other hand, the nation with low scores of PDI and LTO, and high scores of IDV has more numbers of PC brand and high rank of PC market share, such as USA and Japan.

But why UAI and MAS scores of Hofstede have no relationship with the PC market share? According to that "ethics for ordinary people," Confucians make specific ethical demands on certain special relationships, and hold five cardinal rules for the five major dyadic relationships in Chinese society. These relationships are between father and son, where there should be affection; between sovereign and subordinate, where righteousness should be upheld; between husband and wife, where attention to their separate functions should be paid; between elder brother and younger, where there should be a proper order; and between friends, where friendship should be upheld (The works of Mencius, Chapter 3A: Duke Wen of Teng). In view of this, the theoretical model of Confucian ethics for ordinary people is a template for ethical arrangement in interpersonal relationships. Due to the Confucian perspective, it is righteous to decide who has the power of decision-making by the principle of respecting the superior; it is also righteous for the resource allocator to distribute resources by the principle of favoring in the intimate (Hwang 2000, 1995, 1987). At the same time, the PDI, IDV and LTO scores of Hofstede is the fundamental ethical conception in Chinese society which is permanent. But the UAI and MAS scores of Hofstede do not belong to the "ethics for ordinary people" range and these two dimension scores has no relationship with the PC market share.

Therefore, this study concluded that the scores of PDI, LTO, and IDV in the national culture dimension indexes of Hofstede has relationship with national PC brand number and market share and argued that national cultures has relationship with the number and market share of PC brands.

The scores of the national culture dimension indexes of Hofstede has not relationship with the rank of pc brands but the domestic total number and market share of PC brand instead.

Since the national culture dimension Hofstede (1991) is categorized by nations, so it could only analyze the data of country level. The domestic total number of brands and market share are look on as the outcomes of national culture power, but the ranks of PC brands are the outcomes of different business strategies of different companies and belong to the organizational culture level, so can not be analyzed from the perspective of national cultures, therefore, this study is not going to do the investigation of organizational level. Hence, in PC business, this study predicts that the nation with low scores of PDI and LTO, and high scores of IDV in the national culture dimension of Hofstede tend to have more numbers of PC brand and high rank of PC market share.

For this reason, this study proposes the proposition 1:

Proposition 1: The numbers of brand and market share of each nation has relationship with the score of the national culture dimension of Hofstede.

After the Chinese brand Lenovo merged the USA brand IBM in May 2005, a huge change occurred in PC market. Because of the well-known brand IBM enabled Lenovo which is a Chinese brand become the 3rd rank of international market share, and the fact can prove the reliability of the proposition 1 in this study indeed.

The impact of national culture to the floating direction of PC brands

It is easy to understand the scores of PDI, LTO, and IDV in the national culture dimension of Hofstede has relationship with the PC business from the proposition 1 in this study. However, this study wants to comprehend how the scores of the national culture dimension of Hofstede influence the PC brand more. Once we could discover the potential directions and rules from these data, we can apply these principles in the variable and complicated market environment when the PC

business wants to do the transnational marketing, and we help them adjust the globalization business strategy to fit the local national culture and local requirements and raise their survivability in more and more competitive business environment.

Then, this study investigated the relationship between the markets in different nations and the PC brands. Firstly, Table 3 presents the situations of market shares of each USA PC brand from 2001 to 2003.

Table 3: The Carry of Each USA PC Brand from 2001 to 2003

Rank / Year	1	2	3	4	5
2001 Note 1	Dell (23.7)	Compaq (13.8)	HP (10.2)	Gateway (8.7)	IBM (5.3)
2002 Note 2	Dell (25.3)	HP (17.9)	Gateway (5.3)	IBM (4.9)	Apple (3.3)
2003 Note 2	Dell (27.6)	HP (18.6)	IBM (4.7)	Gateway (3.5)	Apple (2.9)
Note 1: 2003 III Editor Group (2004); Note 2: Gartner (2004)					

The USA Top 5 of PC brands and market shares in 2001 are: Dell (23.7%), Compaq (13.8%), HP (10.2%), Gateway (8.7%), and IBM (5.3%), and the total market share of the Top USA PC brand manufacturers is 61.8% of the PC market in USA. Then, the USA Top 5 of PC brands and market shares in 2002 are: Dell (25.3%), HP (17.9%), Gateway (5.3%), IBM (4.9%), and Apple (3.3%), and all the Top 5 PC brands are USA brands. In 2003, the USA Top 5 PC brands are the same members in 2002 without the same order of ranks and market shares. According to the above data, this study found that only the USA PC brands can get the stable positions in USA markets, and the PC brands from Japan, Taiwan, and other countries can not even squeeze in the USA Top 5 PC brands. Though *acer* PC won the honor of the best PC brand in Asia, Compaq is the 2nd, and IBM is the 3rd from Reader's Digest in 2001 (The website of *acer*, 2005). Curiously, why the best PC brand in Asia market can not even find a place to stand in USA PC market. In order to resolve the question, let's take a look on the situation in Japan (see Table 4).

Table 4: The Carry of Each Japanese PC Brand from 2001 to 2003

Rank / Year	1	2	3	4	5
2001 Note 1	NEC (21.1)	Fujitsu (21.1)	Sony (11.0)	Japan IBM (7.7)	Toshiba (7.3)
2002 Note 2	NEC (21.2)	Fujitsu (19.6)	Sony (11.0)	Toshiba (7.4)	Dell (6.9)
2003 Note 2	NEC (20.8)	Fujitsu (19.4)	Dell (8.8)	Sony (8.6)	Toshiba (7.8)
Note 1: 2003 III Editor Group (2004); Note 2: BP Enterprise of Japanese Economy (2004)					

The Japanese Top 5 PC brands and market shares in 2001 are: NEC (21.1%), Fujitsu (21.1%), Sony (11.0%), Japan IBM (7.7%), and Toshiba (7.3%). Then, The Japanese Top 5 PC brands and market shares in 2002 are: NEC (21.2%), Fujitsu (19.6%), Sony (11.0%), Toshiba (7.4%), and Dell (6.9%). In 2003, The Japanese Top 5 PC brands and market shares are: NEC (20.8%), Fujitsu (19.4%), Dell (8.8%), Sony (8.6%), and Toshiba (7.8%). Therefore, we could find out that in addition to the four Japanese PC brands, there were only two foreigner PC brands in these 3 years. And either of these two foreigner PC brands is not *acer* who won the honor of the best Asian PC brand in 2001 from reader's Digest. These two foreigner PC brands were Japan IBM and Dell which have the same characteristic: Both of them are origin from USA. What reasons result in this phenomenon?

According to the proposition 1 in this study, the PC brand has relationship with the scores of PDI, LTO, and IDV in the national culture dimension of Hofstede (1991). So this study speculates that the scores of PDI, LTO, and IDV in the national culture dimension of Hofstede have impacts on the floating direction of PC brand. In another word, the PC brand will flow from the side with low PDI, low LTO, and high IDV to the side with high PDI, high LTO, and low IDV. On the contrary, the PC brand will not flow from the side with high PDI, high LTO, and low IDV to the side with low PDI, low LTO, and high IDV.

The PDI and LTO scores of USA are less than those of Japan, and the IDV score of USA is more than that in Japan, so the USA PC brands can easily enter the Japanese PC market through the power of USA national culture. The PDI and LTO scores of Taiwan are more than those of Japan, and the IDV score of Taiwan is less than that in Japan, so the Taiwan PC brands can not enter the Japanese PC market. And that is the reason why only USA brands in the Japanese Top 5 PC brands .In addition, because of the PDI and LTO scores of Japan and Taiwan are both more than those of USA, and the IDV scores of Japan and Taiwan are less than that in USA, so the PC brands of Japan and Taiwan can not enter the USA PC market. Hence, only the products of USA brands have good sales, and there are no national PC brands can overcome the difference of more scores of PDI and LTO, and less score of IDV than USA in the national culture dimension of Hofstede, and no national PC brand can find a place to stand in USA market as well.

Based on the above analysis, this study proposes the proposition 2:

Proposition 2: The scores of national cultures dimensions have impacts on the floating direction of PC brand:

On the one hand, the PC brand will flow from the side with low PDI and LTO, and high IDV to the side with high PDI and LTO, and low IDV.

On the contrary, the PC brand will not flow from the side with high PDI and LTO, and low IDV to the side with low PDI and LTO, and high IDV.

In view of this, the present paper tries to prove the proposition 2 with the market shares of Chinese PC brands (Table 5). There are 4 Chinese brands in the Chinese Top 5 PC brands in 2001, including Lenovo, Founder, Great Wall, and TCL, and the 5th PC brand is USA brand, IBM. In 2004, there are 2 Chinese brands but 3 foreigner brand manufacturers which are HP, Dell, and *acer* in the Chinese Top 5 PC brands, and so does 2005 with different market shares. Based on the above data, the phenomenon in Chinese market is exactly the same as the conclusion of proposition 2, which means national cultures can influence the floating direction of PC brand indeed. The USA PC brands with low scores of PDI and LTO (and high score of IDV) in the national culture dimension of Hofstede can easily enter the Chinese market with high scores of PDI and LTO (and low score of IDV).

Table 5: The Carry of Each Chinese PC Brand in 2001, 2004, and 2005

Rank / year	1	2	3	4	5
2001 Note 1	Lenovo (15.7)	Founder (9.5)	Great Wall (8.5)	TCL (8.2)	IBM (7.4)
2004 Note 2	Lenovo (18.7)	HP (10.6)	Dell (7.4)	*acer* (5.6)	Founder (5.1)
2005 Note 2	Lenovo (31.3)	HP (9.7)	Dell (6.7)	Founder (4.5)	*acer* (4.4)
Note 1: Tseng et al. (2002); Note 2: ZDNet China (2006)					

Similarly, the PDI and LTO scores of Taiwan are less than those of Mainland China, and the IDV score of Taiwan is more than Mainland China, so the Taiwanese PC brand *acer* can enter the Chinese PC market. But the IDV score in the national culture dimension of Hofstede of Taiwan is less than that of USA, so both of the PC brand number and market share of Taiwan can not compete with those of USA at all. Furthermore, because the scores of the national cultures dimensions, the brands of Mainland China and Taiwan can't enter the markets of Japan and USA. Therefore, we can sure about the probability from the Chinese PC market situation.

Due to the proposition 2 is an important phenomenon. Thus, from the perspective of national cultures, the meaning of national cultures to the PC brands is the nation with low scores of PDI and LTO (and high score of IDV) in the national culture dimension of Hofstede has powerful penetration to enter another foreign market easily and to be accepted by consumers from different national cultures.

Current international marketing of PC manufacturers - from the national culture perspective

It is hard for Taiwan PC manufacturers to enter the USA market

USA is the creator and leader of computer science business, and the advantage exists still. And Dell is one of the international leaders possess strong computer brands. Therefore, if the PC manufacturers in Taiwan want to enter the USA markets, regardless of competing with the science technology of USA, challenge the USA culture behind is the most important thing to do. But the PDI and LTO scores of Taiwan are more than those of USA, and the IDV score of Taiwan is less than that in USA, so the Taiwan PC brands can hardly enter the USA markets. That is why the well-known PC brand of Taiwan, *acer* which can't overcome the difference of national cultures, was forced to absent from the USA retailer market in 1999. The phenomenon is accord with the viewpoint of Cordell (1992), Wang and Lamb (1983), Gaedeke (1973) and Schooler (1971).

It is easy for USA PC manufacturers to enter the Taiwanese market

Because of the PDI and LTO scores of USA are less than those of Taiwan (and the IDV score of USA is more than that in Taiwan), and the developments of Taiwanese PC industry follow USA computer manufacturers generally. Besides, the major PC technology is controlled and leaded by USA, so USA culture can overcome the difference of national cultures, and the USA PC brands can easily enter the Taiwanese PC market. For instance, Dell is a good example. The reality is consistent with the perspective of Pharr (2005) and Wang and Lamb (1983).

It is easy for Taiwanese PC manufacturers (such as *acer*) to enter the Chinese markets

The PDI and LTO scores of Taiwan are less than those of Mainland China (and the IDV score of Taiwan is more than that in Mainland China), and the science technology advantage of Taiwan is more than that in Mainland China, so the national culture of Taiwan can overcome the cultural difference with Mainland China, and the Taiwanese PC brand can enter the Chinese PC market. For instance, the market share of *acer* is the 5th in Chinese PC market. The phenomenon is matches the assertion of Pharr (2005) and Cheng (2003).

It is easy for UAS PC manufacturers to enter the Chinese markets

The PDI and LTO scores of USA are less than those of Mainland China (and the IDV score of USA is more than that in Mainland China), and the IDV score of Taiwan is less than that in USA (and the PDI and LTO scores of Taiwan are more than those of USA), so compared with Taiwan, USA manufacturers enter the Chinese markets more easily. For instance, the market share of HP and Dell is higher than *acer* in Chinese market. The reality is accord with the viewpoint of Kofman and Pharr (2005), Gupta and Govindarajan (1997) and Youngs (1996).

It is easy for Taiwanese PC manufacturers to enter the markets of non-USA countries

Because the PDI and LTO scores of Taiwan are less than those of non-USA countries (and the IDV score of Taiwan is more than that of non-USA countries), Taiwanese manufacturers are competitive competitors to USA manufacturers in the European markets. So the PC sales of *acer* are stunning in European countries. The reality is consistent with the research of Cordell (1992) and Schooler (1971).

Conclusion

According to the results in this study, Taiwanese PC manufactures can refer the ranks of the national culture dimension developed by Hofstede to choose the easier national market to enter and avoid the exhausting of resource. Secondly, if PC enterprises want to enter the nation with low scores of PDI and LTO (and high score of IDV), consider the national cultural different strategy and create a value of innovation could build a specific "blue ocean" strategy of Taiwanese manufacturers.

This study adopted the national culture dimension to analyze the direction of Taiwanese PC brand manufacturers globalization marketing strategy. And the analysis model could predict the positions of science technology and culture as the globalization marketing strategy.

Due to this study is based on the data provided by IDT and Gartner, and the different research organizations may provide different research data, so if other scholars us different data, their results may be inconsistent with the results in this study, and this is one of the research limitations. Secondly, because the limitation of the research money, we only could focus on the data from 2001 to 2005, so we need further investigation to examine that different period of time has the same results in this study. At last, the research project in this study is PC industry, therefore, the results in this study can not apply in other industries (such as fashion-design business, food business), and it is another limitation of this paper.

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