

CULTURAL COMPARISON FOR THE CUSTOMER PREFERENCE OF FEATURES IN ONLINE CONFIGURATORS BETWEEN CHINA AND GERMANY

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Abstract: *The promising configurator development in collectivist country like China calls for more focus on how to design good featured configurators according to different cultural background. This paper examines in which kind of characteristics the design of configurators in China should differ from their German counterparts as an individualist country. Based on Hofstede's cultural dimensions two features were proposed to have preference difference between Chinese and Germans. One feature is the starting solutions listing the most popular designs created by the other customers. The other feature is asking professional designers or friends for advice or opinion. It was found: Chinese as compared with Germans, will be more likely to use the feature of starting solutions listing "the most popular designs created by the other customers" and will honor the advice or opinion about their designs during the design process from a professional designer higher. At last implications and limitations are discussed.*

Key Words: *online Customization, Configurator Design, Cross Cultural, Germany, China*

1. INTRODUCTION

Online customization is becoming a worldwide trend for customers as well a profitable strategy for companies in various industries. Many companies like Adidas, Dell, Levi's or Festo provide online configurators for customers to express their needs and to create personalized products. Configurators, which have many synonyms such as choice board, design system, user toolkits, online customization interface; online decision support system and so on [1-3], play a pivotal role in customer company interaction and product customization.

With the global growth of customization, some researches have investigated the role of culture in online customization[4-6]. They found that consumers in

individualistic countries were more likely to purchase customized products than consumers in collectivistic countries and so on [5,6]. However, the configurators are growing rapidly in China. There are more than 400,000 kinds of products which can be customized through the Chinese biggest ecommerce platform Taobao and more and more companies like Haier, Rocollar have designed online configurators for consumers to customize. The prosperous configurator development practice in collectivism country like China have proved that consumer's preference for customized items have changed with time and now more focus should be put on how to design good featured configurators in different cultures. Since researchers in website design have found that culture is an important factor that should be considered when designing crosscultural websites [7-9].

Europe especially Germany is now standing on the frontier of configurator designs. Many comprehensive features or characteristic can be seen in various German configurators, such as visualization, support, orientation and so on to navigate the customization process and reduce the perceived customization effort. Comparing to Germany, Chinese configurators do not have so sound and diverse features but they may have their own characteristics. Since as observed in previous researches, consumer's behavior and decision is affected unconsciously by cultural background [10]. In the customization process through the interaction with features of configurators, which kind of interaction are consumers looking for and what behavior the consumer have. Especially, it is interesting to see that how people in collectivistic country like China make a balance between the influence of collectivism and their individual preference. In the field of the online customization, many researchers have investigated the design capabilities or characteristics that online configurators should have to improve the perceived

process accordingly enhance the final product satisfaction [11-14], but as far as authors know no research has considered culture as a potential important factor affecting people's preference for designs in configurators. So there has been a paucity of research specifically on exploring cultural influences in configurator feature design.

Therefore, the goal of this study is to compare two culturally different countries, China and Germany, on the preferences of features in online configurators. Present study will specifically try to investigate in which features do Chinese and Germans prefer differently? In which kind of features or characteristics the design of configurators in China should differ from their German counterparts.

In this study, we want to contribute to expanding the cross cultural theory into the context of online customization configurator design and enriching the understanding of the design of configurators. And test whether the traditional cultural theory is applicable to explain the current difference in China and Germany. This paper will be helpful for companies to implement configurators in China and in Germany.

2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

National Culture, which is reported to be strongly rooted in history and appear to be stable over time [15], has been investigated long in information system, human computer interface design and marketing literatures as an important factor shaping consumer behaviors.

In the field of online customization, several researchers have explored the culture influence on consumer's preference for customized products and acceptance of customization web sites. Based on Hofstede's cultural dimensions, Moon [5], found that consumers in individualistic countries are proved to have stronger intention to purchase online customized products than collectivistic countries. Cho and Wang (2010) explained the cultural impact on acceptance of online apparel customization by finding that the effects of influencing factors (Perceived Usefulness; Perceived easy of use; Perceive Security) of attitudes toward online apparel customization differ by culture.

When it comes to configurator design, we posit that consumer preference for different features or characteristics differs across cultures. Different cultures may have different suitable feature design.

In the following, we use Hofstede's [16], cultural dimensions to articulate the potential cultural difference on preference for some configurator features between Chinese and Germans. Hofstede's [16], cultural dimensions have been widely used in studies on Human Computer Interaction (HCI) and culture relationships for many years. But this is the first time to be used in the context of online configurator design. From this perspective, we want to test whether this theory fit with this new context and can explain the preference difference on configurator features or characteristics or not.

Hofstede (Hofstede, 1980) [16] identified four dimensions along which national cultures vary: power distance, uncertainty avoidance, individualism vs. collectivism, femininity vs. masculinity, and provided ratings on these dimensions for many Countries. Using

the cultural dimensions identified by Hofstede, China and Germany has obvious cultural differences in two dimensions: Power distance and Individualism. The index difference is shown in Table 1.

Table 1. National cultural difference between China and Germany. Source: Hofstede, 1980.

Culture Dimensions	China	Germany
Power Distance	High(80)	Low(35)
Uncertainty Avoidance	Medium(60)	Medium(65)
Masculine	Medium(50)	Medium(66)
Individualism	Very Low(20)	Medium(67)

2.1. Feature: starting solutions listing "the most popular designs created by the others"

Customers can be inspired by the product designs published by others [17]. Now many configurators in practice have provided starting solutions which show the other customers' designs at the beginning of the customization. Customers can choose one from a set of prespecified products designed by others as a starting solution, and then refine this starting solution to create their final customized product [10]. This approach to customization is called "customization via starting solutions"[10]. or "refinement from starting points"[14]. Researcher have confirmed that is starting solutions can be helpful for reducing product customization complexity and increasing satisfaction with product choices in prior research [10,11]. Now it is very common seen "the most popular designs created by the other customers" as starting solutions offering on both German configurators and Chinese websites. Some Chinese websites even offer the popularity information of different designs created by the other customers. However, the start solutions listing "the most popular designs created by the others" are a little different from starting solutions listing just prespecified products which occurred in previous research. Except the function of lowering product customization complexity as normal starting solutions, "the most popular designs created by the others" seems like a social influence which stands for the choice of the majority. But the concept of customization is to design the product according to individual's preference not the other's preference. So there may be a conflict between "the most popular designs created by the others" and customization. Especially in the individualism country like Germany, this conflict maybe be bigger than collectivism country like China. Therefore, we want to investigate consumer preference for this feature under different cultural background China and Germany.

According to Hofstede's "Individualism and Collectivism" dimension, Germany is an individualistic country, whereas China is a highly collectivistic country. As proposed by Hofstede (1980) [16], people in individualistic cultures have a strong consciousness of "I" and individual initiative, and they value private life and individual decision, autonomy and variety [5]. Collectivism cultures such as China emphasize the "We" consciousness and organizational membership. People in highly collectivist society value group decisions and security [5]. In the online customization context, people who are willing to customize online probably have

individual requirements that cannot be met with a few standardized products or their ideal product cannot be found in mass product market. So for consumers from Germany, designing their ideal product online is their personal business and it does not have strong relation with the others' choices. In addition, they have higher tolerance on diversity and variety. Therefore, German consumers will likely stick to their individual preference, and tend to care little about the most popular designs created by the others. However, for Chinese consumers who may have their own preferences, designing individual products is not their own thing. Chinese tend to consider the group interests or social norms and rules that do not highly tolerate uniqueness or variety when they make a decision for themselves. In all interpersonal relations, Chinese society focus more on harmony and conformity, while deemphasizing personal goals [18]. By starting from "the most popular designs created by the other customers" and altering it to their preference, Chinese customers can make a designing balance which ensure that their customized products are not deviating far from the social norm and at the same time meet their own requirements. Hence, Chinese customers will be very likely to use the starting solutions listing "the most popular designs created by the other customers" as a starting point. Moreover, "the most popular products" information has been ubiquitous in Chinese ecommerce, maybe this ubiquitous phenomenon will extend into online customization in China. Hereby, we propose that:

H1: Chinese customers, as compared with Germans, will be more likely to use the feature of starting solutions listing "the most popular designs created by the other customers" or be more likely to start from "the most popular designs created by the other customers".

2.2. Feature: ask professional designers or friends for advice or opinion

The customization process in which customers configure their preferences or create their own designs can lead to confusion especially when the customers are face with a lot of choice options [13]. When customers are in confusion with so many possibilities, they may feel uncertain about their choice. The question is how to deal with this confusion during the customization process thus retain customers and improve their customization experience. Now some German configurators have offered the feature of getting feedback from designers. And Nike has provided customers with the feature "ask your friends for help" when customers are not sure of which design is the best. But Nike hasn't offer this feature in their official Chinese configurators yet. Getting some feedback or help during the customization process is a possible way to release confusion and decision difficulty.

According to Hofstede's (1980) dimension of power distance. China is much higher power distance country than Germany. Power distance is the extent to which everyone in a society accepts the unequal distribution of power (Hofstede 1980) [16]. It means that the inequality and the acceptance of inequality between authority and common tends to be higher in high power distance countries than in low power distance ones. Chinese with high power distance are more likely to follow authority

or expert advice. During the design process, Chinese would more likely to ask the professional designers which stand for authority or experts for advice or opinion. Therefore, we propose H2a as:

H2a: Chinese customers, as compared with Germans, will honor the advice or opinion about their designs during the design process from a professional designer higher.

Due to the individualistic culture, for customers from Germany, on one hand designing their ideal product online is their personal task, and it does not have strong relation with others. In the other hand, since the individualistic culture is more likely to tolerate diverse designs, Germans do not have to care much about the views or opinions of others, in other words Germans do not have outside social pressure to get feedback from others, thus their motivation to look for their friend's advice or opinion maybe not so strong. In contrast, people in highly collectivist societies are believed to consider the group interests or social norms and rules as being more important than individual interests. Previous studies also confirmed that eastern people are more other-directed, like to be more socially connected with others that means that they care about others' perception of themselves more than Westerner [6]. And the very novel or weird design is not easily accepted in collectivist culture. So during a design process, in order to ensure that their design alternatives meet the social rules and norms of their peers, Chinese customers like to seek orientation from their peers. Given above, we infer that:

H2b: Chinese customers, as compared with Germans, will honor the advice or opinion about their designs from their friends higher.

3. RESEARCH METHOD

An online survey was sent respectively in Germany and in China on September 2015. The questionnaire was developed initially in English and then translated into Chinese for collecting data in China. In this online survey, shoes were used as the customizable product as it occurred in previous research. And also according to our preparation of the survey, it is not so hard for people in Germany and China to understand online shoes customization. To collect pretest data, the questionnaire was first sent only through author 'social networks. So the results in this paper are only from pretest dataset. The preference of features was measured by sevenpoint Likert scales (e.g. 1 strongly disagree and 7 strongly agree). For the survey in both countries, pictures of the features (as seen in the Fig.1-3) were shown in the survey to help respondents better understand the concept of shoes customization and meaning of the feature of configurators. After showing respondents the pictures and the explanation of the features, they were asked to rate their evaluation on the saying about online configurator features (e.g. "When customizing my shoes, I would like to start from the most popular designs created by other customers.").

There were in totally 33 completed questionnaires collected in Germany while 72 in China. The average age of the German sample is 31-year-old (30.3% female), with the Chinese counterparts 25-year-old (36.3% female). The data were analysed in SPSS 23.0.

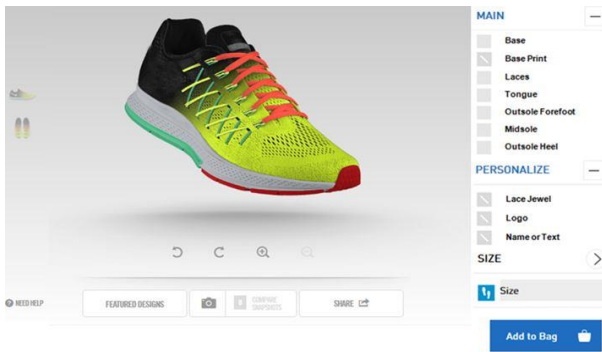


Fig. 1. The screenshot of shoes customization

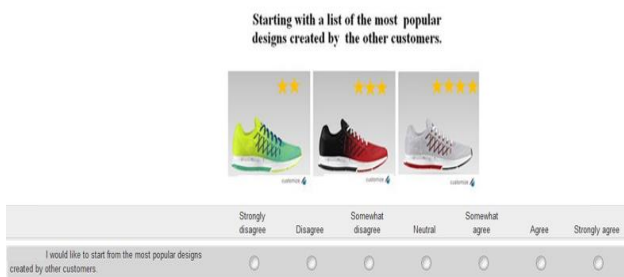


Fig.2. Starting solutions listing the most popular design created by the other customers and the corresponding question

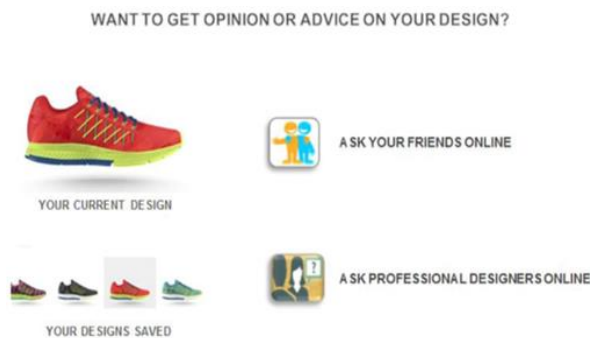


Fig. 3. Ask professional designers or friends for advice or opinion

4. RESULTS

To test the hypothesis, ANOVA analysis was conducted. Fig.4 describes the mean of Germans and Chinese on the preference of different features. From Fig.4, Chinese have higher agreement on the feature starting from the most popular designs created by the other customers and asking professional designers for advice or opinion. Table 2 shows that there is a significant difference on the preference starting from “the most popular designs created by the other customers” between Chinese and Germans. So H1 is supported. As shown in Table 2, the culture difference on preference of asking professional designers during the customization process is significant. H2a is supported. Table 2 shows that there is no significant difference on asking from for advice or opinion, so H2b is not supported. Additionally, we tested whether there is a difference between asking professional designers and asking friends for advice or opinion among Chinese or Germans, but we found that the results were not significant.

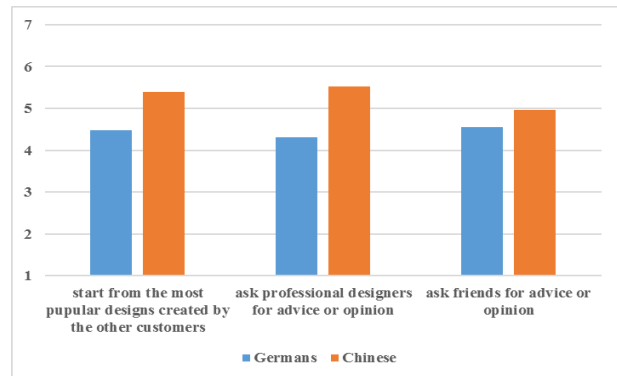


Fig. 4. German vs. Chinese on preference for features

Table 2. ANOVA result

F	Sig.	Hypothesis	
6.319	0.014	H1	Supported
9.506	0.003	H2a	Supported
0.974	0.327	H2b	Not Supported

5. DISCUSSION AND CONCLUSION

This paper examines consumer preference difference on features of configurators in China and Germany. Based on Hofstede’s (1980) cultural dimensions two configurator features (starting solutions listing the most popular designs created by the other customers and ask professional designers or friends for advice or opinion) were proposed to have cultural preference difference between Chinese and Germans. From the online survey result, it is found that: Chinese as compared with Germans, will be more likely to use the feature of starting solutions listing “the most popular designs created by the other customers” and will honor the advice or opinion about their designs during the design process from a professional designer higher.

This paper may provide the contribution by introducing culture in to the context of configurator feature design which was not explored before and expanding the traditional cross cultural theory into this new context. From the results, H1 and H2a were supported and H2b not, we can partly infer that Hofstede’s cultural dimensions still can but may not fully explain the cultural difference on configurator feature preference. Especially in China, the young generation which were born after 1995 has been growing up. Compare to the traditional Chinese, they have some different life and consumption values. Since in the Chinese sample we had 10 samples which belong to this young generation, this maybe one of the reason why H2b was not supported.

By enriching the understanding of the design of configurators, this paper can be an inspiration for companies considering culture factor when implement configurators. By finding more features that are fitting with different cultures, the better features configurators can be developed in the future to give consumers better customization experience. Especially China becomes a huge potential market for online customization. It can be insightful for international companies reaching Chinese market.

But this paper has some limitations in the following aspects which need to be made up in the future. The first is the sample. The data amount is too small. Since the

surveys were sent through author's social media, so the sample may not be generalized. More and large consumer panel data should be collected in the next step. Beside online survey, qualitative research method like focus group can be used to assist in getting a deep understanding of why in different countries people prefer differently. The second is that only two configurator features were discussed in this paper. Since there are many features shown in nowadays configurators and more and more new features are coming with time. So in the future more features should be investigated to gain a systematic knowledge about in which kind of features fit with different cultures. In this paper, we didn't investigate the interaction of culture and configurator feature design on the consumers' perception of customization process and final customized products which will be more helpful for managerial practice.

6. REFERENCES

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