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Cross-cultural Comparison on Customers Preference for Configurators in 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 four characteristics the design of configurators in China should differ from their German counterparts. This paper has combined two research methods. First, an online survey is implemented with 72 respondents in each country. Afterwards, 2 Chinese focus groups (16 participants in total) and 2 German focus groups (16 participants in total) are implemented to validate the result from online survey. Results show that Chinese tend to have positive attitude on social features embedded in configurators such as "asking professional designers or friends for feedback" and "sharing final design via social media", while Germans tend to have negative attitude towards these social features. Moreover, Chinese customers have significant preference difference on valuing the feature of "the most popular option". However, on the feature of "starting from most popular designs created by other customers or from professional designers", there is no significant cultural different reflected, while customers in both countries tend to have positive attitude towards starting from professional's designs.

Key words: *Configurator features, Online customization, Customer preference, Cross cultural*

1. INTRODUCTION

In many industries, companies are faced by the heterogeneous customer demand[10]. In order to satisfy diverse customer need, mass customization has been adopted by many companies as a profitable strategy [33]. Many companies like Adidas, Dell, Levi's or Festo provide online configurators to allow customers to express their product preference and customize personalized products. Configurators, which have many synonyms such as choice board, design system, user toolkits, online customization interface, and so on [7] [25] [40] are used to support customers specifying their preference of products within a given solution space by manufacturer and creating their own product solutions via a "trial and error" and "learning by doing" process [41]. The design of configurators can significantly affect customer perception and behavior in the customization process [25] [40].

Europe has been seen leading in online customization practice with the success examples of European companies like Spreadshirt, miadidas, mymueslietc [1]. The Cyledge configurator database (www.configuratordatabase.com) has a collection of more than 1000 configurators regarding with various industries, among which most of them are founded by western countries such as Germany or America. According to the newest report from The Economist Intelligence Unit, the global structure of demand for customization is shifting [36].They state in their survey of 102 countries that, in the emerging Market-East Asia, the demand for individualized product is already deemed to be high and in three years is expected to overtake developed markets to become the region of highest demand [36]. Correspondingly, the demand for customization is indeed high in China, the biggest emerging-market. This can be seen from the rapid development of online customization in China. Until December 2015, there are more than 40,000 kinds of products which are customizable through the biggest Chinese B2C e-commerce platform - Taobao. In addition, more and more Chinese companies like Haier, Rocollar, Idingke have succeeded in providing online configurators for customer self-customization.

Even though, many comprehensive features or characteristics can be seen in various Western countries configurators, such as visualization of product design and any product alteration in the design process, design support from company and outside, navigation of the customization steps and so on to lead customers

through the customization process as well as to reduce the customer's design effort[11]. Comparing to existing configurators in Western countries like Germany, configurators in China may not have so thorough and diverse features but they may have their particular characteristics. For instance, the social element like connection with social networks is the most conspicuous feature representing Chinese configurators, however it is much less common in German configurators.

Moreover, most Chinese configurators tend to sort designs created by other customers based on the evaluations they receive. Researchers in website design have found that culture is an important factor which influences users' adoption of the websites [3][8][9]. Thus, it would be a risk for international companies to just transform the design of the configurator into the Chinese market without considering the cultural difference between Chinese and Western countries. Cultural psychologists have long proved that systematic differences of norms and beliefs exist across different groups of people with different cultures [17] [30].

With the global growth of customization, some researches have investigated the role of culture in online customization [3] [23] [27]. They found that customers in individualistic culture were more likely to purchase customized products than customers in collectivistic culture [23] [27]. This is because in individualistic cultures people emphasize their individual benefit, freedom and power to make their own decision without considering much other people's opinion or interest [13] while in collectivistic culture, people value the harmonious relationship with group members and strongly consider the group's interest when they are making their decisions [17].However, the prosperous customization development and big prediction for the individualized needs in China have proved that consumer's need for customized products have changed with time. Thus, more research attention should be paid on how to design configurators fitting into different culture values. Especially, how people in collectivistic country like China make a balance between the influence of collectivism and their individual preference during the product configuration process.

Therefore, the goal of this study is to compare two culturally different countries, China as a representative for East Asia and Germany representing Europe, and to see whether and how the cross-cultural difference between these two countries has an impact in the way an online customization configurator should be designed. This paper wants to answer the following research questions: (1) Are there any difference in a customization process due to culture issue between Western Europe(Germany) and Asia(China)? (2) How does the conflict coming from cross-cultural difference between Western Europe (Germany) and Asia (China) have an impact in the way an online customization configurator should be designed?

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. This paper would be helpful for companies to implement configurators in China and in Germany.

This paper is organized as follows: First, we the theoretical background of this research. Then, we describe the development of our hypotheses. This is followed by a description of our research method. In section five, we present the results of our analysis and discuss the alignment of our results with our hypothesis. At last, we finalize our research by outlining our key findings, the limitations of our research and opportunities for further research.

2. THEORETICAL BACKGROUND

2.1 Culture and Customization

Culture is defined as the pattern of values, beliefs, and practices shared among members of an organization that influence thoughts and behavior [18]. Culture is reported to be strongly rooted in history and appear to be stable over time [24].The cultural factor has been investigated with a long history in information system, human computer interface design and product design as an important factor shaping consumer behavior [34]. Cyr et al. [4] found that 'different cultural groups have different preferences regarding presentation of product attributes, presentation of product information, and access to product information'.

In the field of online customization, several researchers (e.g. [3], [23],[25]) have explored the culture influence on consumer's preference for customized offering, acceptance of customization web sites or the customization choice. Based on Hofstede's cultural dimensions, Moon [5] finds that customers in individualistic cultures (e.g. American and most western European cultures) are proved to have stronger intention to purchase online customized products than collectivistic cultures (e.g. Chinese, Japanese and most Asian cultures). Likewise, participants in collectivistic culture show a more favorable attitude toward less highly individualized messages and participants in individualistic culture show a more favorable attitude toward highly individualized messages [5]. Kramer et al. [25] find that cultural orientation affects responses to personalized recommendations. Individuals who exhibit interdependent or collectivistic tendencies tend to be more receptive to recommendations that are personalized to the collective preferences of relevant in-groups, while individuals who exhibit dependent or individualistic tendencies tend to be more receptive to recommendations that are personalized to their own preferences [25].

Cho and Wang [3] investigate the cultural impact on customers' acceptance of online apparel customization in the USA and Taiwan by arguing that the effects of perceived usefulness, perceived ease of use and perceived security on attitudes towards online apparel customization differ by culture. Customers' perception of usefulness has more influence on customers' attitude towards online customization in individualistic cultures, whereas the ease of use perception is more influential

in collectivistic cultures on the acceptance of online research does not imply which characteristics are helpful for the arousal of perceived usefulness and perceived ease of use respectively deriving from online customization process. Bellis et al. [2] suggest that providing mass customization in highly uncertainty-avoiding cultures can have negative consequences for customers and companies, including longer configuration duration, lower conversion rates to actual purchase the customized product, and a reduced degree of sharing one's product with other customers.
Still there is a lack of research specifically investigating consumer's preferences of specific features in online configurators in different cultural background. Based on the literature above considered, we posit that consumer preference for different features or characteristics of configurators differs across cultures.

2.2 **Features of Configurators**

Randall et al. [37] have defined five principles for user design of customized products and the corresponding features that support such principles: customize the customization process, provide staring points, support incremental refinement, exploit prototypes, teach the customers. For example, to customize the customization process according to different customers can be executed in the feature of providing novice customers with a needs-based interface and providing expert users with a parameter-based interface. Similarly, Trentin et al. [39] conceptualize five configurator capabilities and develop a scale for the measurement of these capabilities: Focused navigation, Flexible navigation, User-friendly product space description, Easy comparison and Benefit-cost communication. These capabilities almost have covered almost all the features of configurators mentioned in previous researches. Piller and Walcher [32] classify the features of configurators into four categories which are Visualization features, Navigation help, Company help and Customer help.
After examining the studies concerning the principles and characteristics for configurators, we find that the features which belong to the scope of "Company help" and "Customer help" are often discussed which are more susceptible to consumer types and consumer trait as well [9] [14] [15] [37]. According to Piller and Walcher [32], customer help is the general term used to name the features about suggestions or the analysis of other customer's choices in terms of (a) "design inspirations" created by other customers,(b) recommendations based on the customization behavior of other customers like "bestseller", "No. 1 configuration",(c) exchange possibilities, such as a tell-a-friend-function[32]. Company help refers to specific features as (a) design examples provided by the company for customers to start the design process etc., (b) design feedback like experts advise or recommendations on the initial design etc., (c) product information about the effect of individual option on product performance etc. [32]. The above-mentioned features are also largely referred in other researches.
For example, Randall et al. [37] suggest a principle "providing starting solutions" for user design of customized apparel customization [3]. However, Cho and Wang's products. This principle can be implemented with the specific features as providing design inspirations or examples taken either from the other customers or from the company.

3. HYPOTHESES DEVELOPMENT

This section explores the role of culture influence on configurator design. Draw support cultural dimensions theory from Hofstede [18], we illustrate how the customers in China prefer configurator features differently from their German counterparts
We use Hofstede's [18] cultural dimensions theory to articulate the potential cultural difference on preference for some configurator features between Chinese and Germans. Hofstede's [18] cultural dimensions have been widely used in studies on Human Computer Interaction (HCI) and culture relationships for many years.
Hofstede [18] 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. Table 1 shows the scores of Germany and China in Hofstede's cultural dimensions. Referring to Table 1, China and Germany has obvious cultural differences in three dimensions: power distance, individualism and uncertainty avoidance. Germany has a more individualistic culture with flatter hierarchies, while China has a collectivist culture with centralized political power and tall hierarchies. The dimension 'individualism vs. collectivism' which is well known in literature, also refers the most with the topic of this paper.

Table 1. Cultural Dimension Scores for Germany and China [17]

Culture Dimensions	China	Germany
Power Distance	High (80)	Low (35)
Uncertainty Avoidance	Medium (30)	Medium (65)
Masculine	Medium (66)	Medium (66)
Individualism	Very Low (20)	Medium (67)

3.1 **Cultural Difference Impact on the Customer Preference for Configurator Features**

3.1.1 *Feature 1: Starting solutions, "the most popular designs created by the others" or "designs from professional designers"*

Customers can be inspired by the product designs published by others [31]. Now many configurators have provided design examples which show the already completed designs as inspirations which can be easily altered according to individuals' preferences [1]. Customers can choose one from a set of prespecified products created either by other customers or by professional designers from the company as a starting solution, and then refine it to create their final customized product. This approach to customization is called "customization via starting solutions" [15] or "refinement from starting points" [37]. Researcher have

confirmed that starting solutions can be helpful for increasing satisfaction with product choices in prior research [15] [37].

Now many configurators from both China and Germany have provided some complete designs created by other customers as starting solutions for the designer to choose. customers. Some Chinese configurators even show the popularity about different complete designs such as “Nr.1 design”.

However, apart from lowering product customization complexity, the starting solutions as “the most popular designs created by the others” contain social information which implies the choice of the majority. In other words, “the most popular design created by others” means that most people select this design as a starting point. However, the essence of customization is to self-design the product according to individual’s preference rather than the other’s preference. So there appears to be a contradiction between “the most popular designs created by the others “and the idea of self-customization. Since the self-customization means designing unique product which is made only for self-customizer, but starting from the most popular designs may ruin the product uniqueness as it stands for the majority's preference or needs. According to Hofstede’s [18] “Individualism and Collectivism” dimension, Germany is an individualistic country, whereas China is a highly collectivistic country. So, the conflict between social influence such as others preference or choices and own preference or choices may be bigger in Germany than in China.

As proposed by Hofstede [18], people in individualistic cultures have a strong consciousness of “I” and individual initiative, and they value private life and autonomy and variety in individual decision [5]. Collectivistic cultures such as Chinese culture emphasize the “We” consciousness and organizational membership. People in highly collectivist society value group decisions and security [16]. Based on previous research [18] for customers from Germany, designing their ideal product online is their personal task and it does not have strong relation with the others’ choices. In addition, they have higher tolerance on diversity and variety of people’s product choices. Therefore, German customers will likely insist on their individual preference, and tend to care little about the most popular designs created by the others. However, for Chinese customers, designing individual products is not their own task, instead it is an activity that they have to consider the group interests or social norms and rules that do not highly tolerate uniqueness or variety. In all interpersonal relations, Chinese society focus more on harmony and conformity, while deemphasizing personal goals [29]. By starting from “the most popular designs created by the other customers” and altering it to their preference, Chinese customers can make a designing decision which ensures that their customized products are acceptable by others and at the same time meet their own requirements. Hence, Chinese customers will be very likely to use the starting solutions listing “the most reducing product customization complexity and popular designs created by the other customers” as a starting point

Concerning the professional designs as starting solution, this might be related with the dimension of power distance (PD) in both countries. This dimension measures to which extent people accept and expect the power is distributed unequally [18] in a culture. Previous researches on user interface area has found that high PD cultures expect emphasis on experts, official logos on websites, while low PD cultures expect shallow mental models [21]. Also, people from low PD cultures expect to be treated as equals, while high PD cultures accept the difference between citizens and leaders [18]. China has a very high power distance; thus, they tend to subject to expertise. This can result to a higher trust in the professional design. Thus, it is predicted that:

H1a: Chinese customers, as compared with Germans, will be more likely to start from “the most popular designs created by the other customers”.

H1b: Chinese customers, as compared with Germans, will be more likely to start from the starting solution ‘professional designs’.

3.1.2 *Feature 2: The Most Popular Option*

During online customization process, customers have to select the preferred option on each product component and combine product components as they want. For example, when designing a T-shirt, a customer needs to indicate their color of front among many given options red, green, light red, yellow, etc. However, a too wide variety of available options of product components might lead to confusion to customers called the “paradox of choice”[35]. In this case, the additional value of choice can be outweighed by the perceived effort the customer has to invest into finding the right product [34]. Mass confusion can become a major problem as customers might not finish the customizing process [35]. To overcome the burdens of confusion resulting from overload information, such as a large number of options of a product attribute, some configurators exhibit the feature that shows the distribution of design parameters and product attributes across the consumer population to teach customers how to make a decision among many choices [37]. This is echoed with product feature recommendations by other customers [15]. Here we further propose the feature “most popular option” representing the most selected choice on product attribute level. In other words, it shows the popularity information which gives customers the hint, which option is the most chosen one on this product attribute.

This features regards the other customers’ choice on the product attribute or component level rather than on the whole product. In other words, it represents the popularity of the which color is the selected most by others rather than which T-shirt design is the most liked by other customers. Selection on product attribute is a rather individual and trivial task. Due to

the individualistic culture in Germany [18], it seems likely that German customers will take the opportunity to specify their individual preference instead of following the most popular option, because selection on each attribute reflects the core of customization and it is totally their own responsibility. Customers in collectivistic cultures are found to have lower need for uniqueness than customers in individualistic culture [20]. Moreover, due to the collectivistic culture, Chinese customers tend to integrate group's interest into their personal decision, so Chinese customers would be more compatible to the information about which option is most chosen. Hereby, it is proposed that:

H2: Chinese, as compared with Germans, will be more likely to value an indication by the configurator that a special option is "most popular" and select the "the most popular option".

3.1.3 *Feature 3: Feedback About Initial Design-Ask Professional Designers or Friends for Advice*

The customization process in which customers configure their preferences or create their own designs can lead to confusion especially when the customers are faced with a lot of choice options [5]. When customers are in confusion with so many possibilities, they may feel uncertain about their choice thus undermine satisfaction with customization experience and the final design [40].

To deal with the uncertainty of the product designs during the customization process, 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. However, Nike hasn't offered this feature in their official Chinese configurators yet. Getting some feedback or support during the customization process is a possible way to release confusion and decision difficulty or uncertainly for customers [12].

According to Hofstede's dimension of PD China is much higher PD country than Germany [17]. 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 PD are more likely to follow authority or expert advice [18]. 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 H3a as:

H3a: Chinese, as compared with Germans, will honour the advice or opinion about their designs during the design process from a professional designer higher.

On one hand, due to the individualistic culture, for Germans, designing their ideal product online is their personal issue, and it does not have strong relation with others. On 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 the 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 [20][25]. Previous studies [27] also confirmed that Asians are more other-directed, like to be more socially connected with others that means that they care about others' perception of themselves more than Western. The very novel or weird customized design is not easily accepted in collectivist culture. So, during a design process, to ensure that their design alternatives meet the social rules and norms of their peers, Chinese customers like to seek orientation from their peers. Thereby, it is inferred that:

H3b: Chinese, as compared with Germans, will honour the advice or opinion about their designs from their friends higher.

3.1.4 *Feature 4: Sharing of Final Design*

Online configurators are becoming increasingly social in terms of supporting more and more social interaction [14]. For example, many configurators allow customers to share their designs to social media [9] [16]. Social media channels such as Facebook, Tweets penetrate the field of online customization. Social media icons can be placed on the customization website and users can directly visit their social network by clicking the social media icons. According to Configurator Database Report 2013 [1], 358 among 900 companies offer the possibility of sharing their content via social media. Now this feature is not only common seen in German websites, but also very common in China, as China has more social local channels like Wechat, QQ, Renren, and Weibo.

Firstly, again referring to the individualistic culture dimension, German customers don't concern as much about others' view or perception of their self-more as Chinese, thus their motivation to share their designs via social media maybe not so strong. Sharing their design to social media is a way to be socially connected with others.

In addition, the sharing behavior is related with the "Face" culture specially appearing in China which is not proposed in the early work of Hofstede [18]. "Face" represents a person's reputation and feelings of prestige in the workplace, the family, personal friends, and society [22]. On one hand, due to the "I design it myself" effect [12], sharing the final design to friends or public via social media can enhance the proud of authorship [12] and the self-image [28] especially when the consumer perceives final design as creative and feel proud of it. In this way, social sharing becomes a way to save "Face" for Chinese. On the other hand, sharing into social network about their designs can also have negative influence on customers' satisfaction with their final choices [16]. Especially when customers get negative feedback after sharing [16]. Hence to avoid bad comments from others about the final product which are not changeable anymore, when the consumer perceives

final design being rather weird or unusual, they would not like to share it into the social media.

Lastly, the dimension of uncertainty avoidance indicates the extent to which the members of a culture feel threatened by ambiguous or unknown situations and try to avoid it. Germany is a strong uncertainty avoidance country comparing to China as can be seen from Table 1. Western customers are found to have more privacy concern than Asians and they do not easily trust the social websites [3]. Especially since the self-customized products may contains personal information (e.g. body size, name or similar), sharing of a self-design can be perceived as an ambiguous situation more by German customers than by Chinese ones. Thus, it is hypothesized that:

H4: Chinese, as compared with Germans, will be more likely to share their finalized designs via social media when they perceive their design as creative and feel proud of it, but more unlikely to share when perceive their design weird or unusual.

4. RESEARCH METHOD

This research has combined two research methods. First an online survey is done as a quantitative method. Subsequently, we use focus group to better understand whether and why hypotheses are supported or not.

An online survey is sent by email respectively in both countries on September 2015.

The questionnaire is developed initially in English and then translated into Chinese/German for collecting data in China/Germany. In this online survey, shoes are used as the customizable product. This product category is selected based on pre-survey results that showed the participants' familiarity with shoes self-configuration process.

Another important reason for choosing shoe as the object is that culture is found to affect responses to personalized recommendations for only products whose consumption or choice decision is subject to public scrutiny [25]. Shoes are exactly public products.

In the survey, customization scenarios are described with pictures of the regarding features (as seen in the Figure1-4) to help respondents better understand the feature of configurators. After showing respondents the pictures and the explanation of the features, they were asked to rate their evaluation on online configurator features (e.g. “When customizing my shoes, I would like to start from the most popular designs created by other customers.”). The preference of features is measured by seven point Likert scales (1=strongly disagree and 7=strongly agree). For example, with the feature about ‘‘feedback about initial designs’’, we ask participants to rate on the questions ‘‘During the customization process, I Would you like to ask friends for advice’’ and ‘‘During the customization process, I Would you like to ask friends professional designers for advice’’. So, if they answer 5, if means that they agree with asking friends or professional designers for advices.

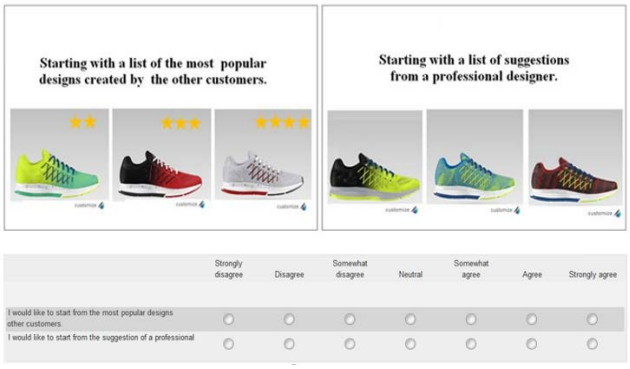

Figure 1. Starting solutions from most popular designs from other customers or from professional designs and the corresponding questions

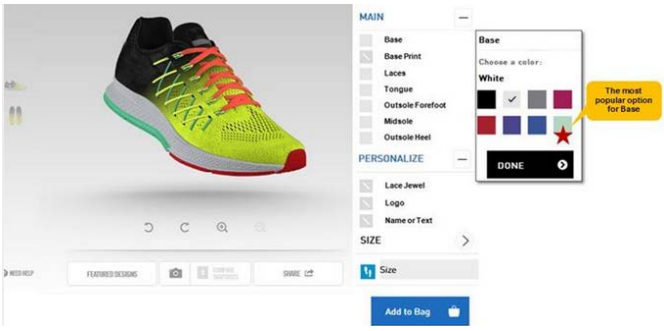

Figure 2. The most popular option

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

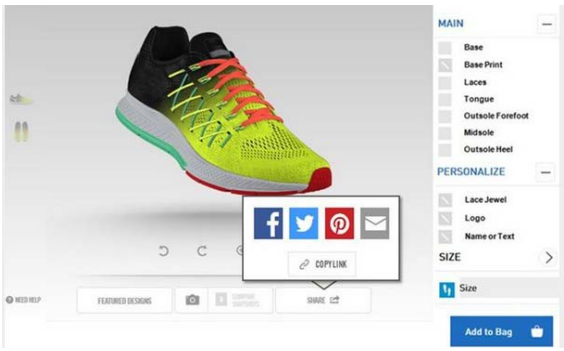

Figure 4. Social sharing via social media

There are in totally 71 completed questionnaires collected in Germany while 72 in China. The demographic of the participants is shown in table 2. The data is analyzed in SPSS 23.0.

Table 2. Demographics of respondents in the survey

Number of the respondents	Chinese (72)	Germans (71)
Age: 18-25	88.8%	46.5%
25-32	11.2%	53.5%
Male	60.02%	67.6%
Above bachelor degree	56%	76%
Online customization experience	19%	25%

To test our theoretical interpretation of the cultural difference on customer's preference for features and explain the result of the online survey, we conduct four focus groups in total with two groups consisting only of people with a German cultural background and two groups with a Chinese cultural background. The group size varies from 5-8 participants per group.

The participants were students recruited from the Renmin University of China and from RWTH Aachen University. Their age ranges from 20-27. All the focus groups are hold in Chinese and German to prevent that some participants cannot express their thoughts properly.

The author holds the Chinese focus groups and the German assistance holds German parts. All focus groups are recorded by audio and semi-conducted with predefined questions focusing on the four features in section 3. Each group lasts in average 45 mins.

5. RESULTS AND DISCUSSION

To test the hypothesis, ANOVA analysis is conducted in SPSS 23.0. The summary of the result is shown in table 3.

H1a and H1b: Starting solutions

H1a and H1bare not supported (Sig.>0.1). That means there is no significant difference found on preference of "starting from either most popular design created by other customers" or "from professional designers". But from table 3, we can see that respondents in both countries tend to have positive attitude towards starting from professional's designs, but neutral towards starting from most popular design from other customers.

During focus group sessions, many Chinese participants indicate that the idea of self-customization is not so compatible with others-customization as ''the most popular designs''. This obvious contrast renders customers in China to hold neutral towards popularity. That could be one of the possible reason why H1a is not supported.

And professional designs are reported to be perceived higher reliable within German groups. This is neglected in our hypothesis development on the basis of Hofstede's cultural dimensions theory [18].

Table 3. The ANOVA results of online survey

Features	F-value	Sig.	Mean Germans	Mean Chinese	Hypothesis	
Start from "the most popular designs created by the others"	0.182	0.670	4.521	4.639	H1a	×
Start from "designs from professional designers"	0.529	0.468	5.133	5.278	H1b	×
Value "most popular option"	25.767	0.000*	3.366	4.819	H2	√
Select "most popular option"	35.813	0.000*	3.225	4.681		
Asking professional designers for feedback	36.207	0.000*	3.715	5.375	H3a	√
Asking friends for feedback	35.180	0.000*	4.085	5.625	H3b	√
Share finalized designs via social media when perceive final design as creative and feel proud of it	130.06	0.000*	3.028	5.97	H4	√
Share finalized designs via social media when perceive their design weird or unusual	48.654	0.000*	2.592	4.46		×

H2: Most popular option

As is seen from table 3, H2 is supported (Sig.<0.05) Chinese respondents have significant difference on valuing the most popular option and selecting it in comparison with German counterparts. In other words, Chinese respondents tend to some extent agree with having access to this popularity information and they would like to select the most popular option if this information is shown to customers

During focus group sessions, Chinese participants also express a higher need to have this information aside than Germans. Regardless of whether they choose the most popular option or not, at least they would like to have a reference about the distribution of the options first. While majority of German participants in focus groups think this information not valuable as it is disturbing themselves and selection of the option is their individual task to express own preference. So, there is no need to incorporate others choices. The discussion is in line with our theoretical underpinning about individualism and collectivism dimension. Some German participants point that this information can be valuable as it provides hints to distinguish by avoiding from following the most popular option.

H3: Feedback about the initial designs

As is shown in table 3, H3a and H3b are supported (Sig.< 0.05).The culture difference on preference of asking professional designers or friends for advices or opinions during the customization process is significant. It is worth noting that Chinese respondents have obvious positive attitude towards getting feedback. While Germans respondents' attitude tends to be negative on asking feedback from professional designers and neutral on asking feedback from friends.

During focus group sessions, many German participants state that they would not like to use the

feedback option anyway, because it is their own product and their own duty to finish this design. It is also a reflection of individualistic culture in Germany. But this opinion is not found in the Chinese focus groups, where the feedback option is generally much appreciated. It is also an indication of the Chinese collectivistic culture. Chinese participants feel the need to align their preferences with the social norm and want to get the feedback from their communities. Generally, all focus groups favor the feedback by friends a little over the feedback by professionals. One explanation from the focus group is that the advice or opinion from professional designers are normally not available even though they appear in the configurators.

H4: Sharing the final design

As we can see from table 3, Chinese respondents, as compared with Germans, will be more likely to share their finalized designs via social media when they perceive their design as creative and feel proud of it ($Mean_{Chinese}$ *=5.97,* $Mean_{Germans}$*=3.028*, Sig.<0.05*).* However, when the final design is perceived weird or unusual, Chinese respondents are still more likely to share it via social media ($Mean_{Chinese}$=4.46, $Mean_{Germans}$=2.592, Sig.<0.05), instead of being less likely to share. Therefore, H4 is partly supported. There is a significant cultural difference on the preference of sharing final design to social media. Chinese respondents tend to have positive attitude towards sharing when they feel good about their final design ($Mean_{Chinese}$=5.97). But they are holding neutral attitude toward sharing when they feel negative about their final design ($Mean_{Chinese}$=4.46). German participants are not likely to share in any case as the $Means_{Germans}$ are relative low which stands for disagreement with sharing. Moreover, the same as Chinese respondents, German participants are more unlikely to share when they feel negative about their final design comparing with when they feel positive about their final design. This sharing tendency among Chinese and German customers is consistent with Bellis et al. [2] which finds that customers in high uncertainty-avoiding markets share their customized product less often with others relative to customers in low uncertainty-avoiding markets.

The same result is found in focus groups. German participants have little intention to share their individualized product with a community, they need quite big incentives to do so like price reduction. The reason stated by German participants is more in line with the individualistic culture, but less with privacy concern. They do not care about those opinions so much especially after they have found their favorite design. In contrast, most Chinese participants would share it because they are proud of the final product which they have spent a lot of effort on. Yet they are more afraid of bad comments and wish opportunities to change their design after sharing, if they get to many bad comments.

So, from the focus group, it is in confirmed that the “Face” and collectivistic culture among Chinese participants that lead Chinese to feel dependent on their social network and need approval to feel satisfied with their design. Our results also confirm that finding that Chinese are strongly in favor of using social network and are witnessed frequently sharing their daily life within their community [2].

6. CONCLUSION

This paper examines consumer difference on the preference for different features of configurators in China and Germany. Based on Hofstede’s [18] cultural dimensions theory, we focus on four types of features and explore how the culture can influence customers’ preference on these features in China and Germany. These four types of configurator features are (1) starting solutions – ‘‘the most popular designs created by the other customers or professional designers’’ also (2) most popular option as well as (3) feedback about initial design - ‘‘asking professional designers or friends for advice’’ and (4) social sharing of final.

After sequentially implementation of two research methods: online survey and focus group, it is found that: Chinese customers have significant preference difference on asking for feedback, valuing the most popular option and sharing final design relative to German customers, except on starting solution. Specifically, Chinese customers relative to German customers: will be more likely to value and select an indication by the configurator that a special option is "most popular"; will honour the advice or opinion about their designs during the design process from a professional designer higher; will honour the advice or opinion about their designs from their friends higher; will be more likely to share their finalized designs via social media when they perceive their design as creative and feel proud of it. Moreover, Chinese tend to have positive attitude on social features embedded in configurators like asking professional designers or friends for feedback and sharing final design, while Germans tend to have negative attitude towards the above social features. Regarding starting solution, customers in both countries tend to have positive attitude towards starting from professional’s designs, but neutral towards starting from most popular design from other customers.

By utilizing the cultural dimensions theory [18] into the context of online customization design, this paper has confirmed the applicability of this theory and enriching the understanding of the design of configurators. We use the latest cultural dimension’s index from Hofstede [17], so the definition of the cultural dimensions and the rated scores in China and in Germany is tested to be valid. In others worlds, this theory is still suitable to explain the culture in nowadays China and Germany.

This paper can be an inspiration for companies considering culture factor when implement configurators. By the leverage of the research finding, companies who want to enter Chinese market should focus more on designing features facilitating social interaction with others. It can be implemented in the way of incorporating the communication about advice or opinion on the design into the customization process,

and allow more channels for Chinese customers to socially connect with others.

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 a little small. Since the Large consumer panel data should be collected in the next step to confirm the findings. In addition, this paper has only focused on the preference difference on some features. We haven't investigated the interaction of culture and configurator feature design on the customers 'perception of customization process and final customized products' which will be more helpful for managerial practice.

While this paper only focus on four types of features, in the future more features could be explored systematically by including exploring the emphasize of configurator capabilities in each culture. More importantly is to find out the influence of the features on the intention to customize and the consumer value on customized product in different background by measuring the theoretical constructs such as perceived usefulness and perceived ease of use, and perceive enjoyment.

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Kulturološko poređenje preferencija konfiguratora između potrošača iz Kine i Nemačke

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Apstrakt

Razvoj konfiguratora u kolektivističkoj zemlji poput Kine, zahteva veći fokus na projektovanju konfiguratora sa karakteristikama koje su u skladu sa različitim kulturama.U ovom radu su istražene četiri karakteristike konfiguratora u Kini, koje bi trebalo da se razlikuju od onih u Nemačkoj.U te svrhe su kombinovane dve istraživačke metode. Prvo je sprovedena onlajn anketa u kojoj je učestvovalo po 72 ispitanika iz svake zemlje. Nakon toga su korišćene dve ciljne grupe iz Kine (ukupno 16 ispitanika) i dve ciljne grupe iz Nemačke (ukupno 16 ispitanika) radi validacije rezultata onlajn ankete. Rezultati pokazuju da stanovnici Kine imaju pozitivan stav prema društvenim karakteristikama konfiguratora, kao što su „traženje povratne informacije od profesionalnih dizajnera ili prijatelja" i „deljenje krajnjeg dizajna na društvenim mrežama", dok stanovnici Nemačke imaju negativan stav prema ovim društvenim karakteristikama konfiguratora. Osim toga, potrošači iz Kine značajno drugačije vrednuju karakteristiku „najpopularnija opcija". Sa druge strane, ne postoje značajne kulturološke razlike kada govorimo o karakteristici „započinjanje od najpopularnijeg dizajna koji su kreirali drugi potrošači ili profesionalni dizajneri", dok potrošači u obe zemlje imaju pozitivan odnos prema započinjanju od dizajna profesionalaca.

Ključne reči: *Karakteristike konfiguratora, onlajn kastomizacija, preferencije potrošača, međukulturno*