



## **Drivers of Customer Brand Engagement and Value Co-Creation in China: a Prioritization Approach**

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**Abstract:** Engaging customers in co-creation activities and making them active partners in the value creation and innovation processes as a new marketing perspective has become a widely accepted approach in today's highly competitive business environment. However, research on the subject has mainly focused on the factors that motivate the customers to participate in co-creation. Little is known about the firm-based factors that can have impacts on the customers' motivations. Using a prioritization approach with Analytical Hierarchy Process, the aim of this paper is to analyze the relative importance of perceived brand innovativeness, customer-based brand equity, relationship equity and brand literacy compared to each other in customers' willingness to engage in co-creation. The results show that when deciding to engage in co-creation customers first consider the ability of the brand to innovate (brand innovativeness), followed by the relationship equity, customer-based brand equity and brand literacy. The present study is one of the first to empirically examine drivers of customer engagement in co-creation from the perspectives of innovativeness and customer equity drivers in an emerging market like China.

**Keywords:** Co-creation, Customer engagement, Brand innovativeness, Customer-based brand equity, Relationship equity, Brand literacy, Prioritization, China

### **1. Introduction**

In today's highly competitive business environment, companies are working on securing competitive advantage through creativeness and innovation particularly in the global level. However, being creative and providing innovative products to differentiate their offers from the competitors require developing new business opportunities and perspectives. Such perspectives recently consist of engaging the customer and making the customer an active partner in the value creation and the innovation process. Customer Engagement (CE) in new product development or value co-creation places the customer's behavior and attitude at the center of the marketing actions for strategic marketing as well as strategic management purposes. For instance, Crowdsourcing is the practice of engaging a 'crowd', a considerable number of people for their capabilities, ideas, and participation to generate content, solve problems or help facilitate the process of products and content creation. Companies essentially try to tap into the collective intelligence of the customers or prospects to complete business-related tasks that a company usually either perform itself or outsource to a third-party provider. Powered by new technologies and social media, Crowdsourcing is becoming a widely adopted business practice by many multinational companies across the world. How to engage customers in co-creation activities and make them participate in the value creation process is a crucial issue for marketers and practitioners.

Some researches on Customer Engagement have mainly relied on qualitative and descriptive case studies to explain the conceptualization of Customer Engagement (Brodie et al., 2011) or outline conceptual frameworks of consumer Co-creation (Hoyer, et al 2010). Some other researches have addressed customers' motives to engage in co-ideation, co-creation, or word-of-mouth activities and have focused on the motivational nature of customer engagement in collaborative product development (Zwass, 2010; Füller, 2010; Antikainen, 2011; Vivek et al, 2012; Roberts et al. 2014). Few researches have investigated and examined the key factors that influence value co-creation (e.g., Chesbrough, 2003; Prahalad & Ramaswamy, 2004). Little is known about the main customer-based and company-based drivers that illustrate the cognitive, emotional, and behavioral dimensions of customer engagement (Hollebeek,

2011) and influence the willingness of customers to engage in co-creation throughout the different stages of the new product or service development.

There is also a dearth of research on customer brand engagement in the international context. Specifically, research did not extensively analyze approaches that foreign brands should emphasize on to develop sound customer engagement programs or strategies to improve customer co-creation in NPD in emerging markets like China where consumers' preferences, tastes, and interpretations are different from those of the western cultures. The differences rely on the market dynamics, the levels of affluence and the audiences' reactions to brand messages or advertizing campaigns. In China, initiatives from foreign companies to include the customers in the new product/service development through social media and collaborative platforms have been mainly noticed in the consumer goods as well as in the automobile industries. Companies like Coca-Cola (Crowdsourcing platform), Pepsi Co (creative challenges), Nescafe (design contests), Ford (Mobility Integration Challenge) and Volkswagen (People's Car Project) have already invited their customers to provide new product or service ideas or to engage in the value creation or proposition process.

This paper is a part of a study that suggests that customer co-creation in NPD can be driven by the customer's perceived value through the innovativeness of the brand and customer equity drivers and that the cultural context can affect the customer behavior through brand literacy (Mane, 2016). While controlling for financial and social rewards, that study analyzed the effects of perceived brand innovativeness (specifically consumer's overall assessment of new products) and the customer equity drivers (Lemon et al., 2001) customer-based brand equity and relationship equity on behavioral customer engagement namely CE willingness in co-creation. The findings of that study demonstrated that there were positive and significant effects between those variables. Drawing on concepts and insights from the areas of relationship marketing, consumer behavior, and brand management, this study seeks to investigate what factors influence the motivations of Chinese customers to engage in co-creation activities of foreign brands by prioritizing through AHP a set of factors that have positive effects on customer engagement willingness.

The paper begins with a review of relevant theoretical perspectives on customer engagement in co-creation and new product development and the motivations of customers to participate in value co-creation. In the second section, the research methodology describing the different steps included in the analytical hierarchy process is presented. Section 3 provides the results of the pair-wise comparisons, the rankings of the factors along with the consistency ratios. The final section of the paper is dedicated to a discussion of the theoretical, practical and managerial implications of the study, the limitations of the research and some suggestions for future research

## **2. Literature Review**

### **2.1 Customer Brand Engagement and Value Co-Creation**

Customer Engagement (CE) is a marketing approach that allows the customers and prospects of a brand to participate and get involved (stronger commitment) in defining a company's marketing. Customers or prospects choose the advertisement or the product, service, offer, as well as the media support. From the moment a company or a brand or the customer him/herself initiates a dialogue, an action favoring the marketing of a company or a brand, then it engages with it. Customer Engagement Marketing aims at creating, stimulating and influencing customers' attitudes.

Brodie et al. (2011) provided a broad and rigorous theoretical analysis of the CE concept. The authors have examined the use of the term "engagement" in the social science, management, and marketing academic literature, as well as in specific business practice applications and suggest that in the marketing field, the concept has its theoretical roots in the S-D logic and the expanded domain of relationship marketing. The S-D logic of marketing (Vargo and Lusch, 2004, 2008) advances that each customer is a resource integrating and a value-creating entity and points out the importance of customers' proactive contributions in the co-creation of personalized experiences through active, explicit and ongoing dialogue and interactions (Hollebeek, 2011). In the same sense, Hollebeek (2011) addresses customer engagement from the customer-brand perspective and defines customer engagement with a specific brand (Customer Brand Engagement) as "the level of a customer's cognitive, emotional and behavioral investment in specific brand interactions", and identifies three CE dimensions: immersion (cognitive), passion (emotional) and activation (behavioral). Immersion has been defined as 'a customer's level of brand-related concentration in particular brand interactions.' Passion has been defined as 'the degree of a customer's positive brand-related affect in particular brand interactions.' As for Activation, it has been defined as 'a customer's level of energy, effort and/or time spent on a brand in particular brand interactions'.

It reflects the behavioral facet of customer brand engagement assimilated to a degree of positive, dynamic energy, and/or time expended on focal brand interactions (Hollebeek, 2011). The behavioral dimension of CE may be manifested through co-ideation (providing ideas for new products), co-creation (participate in the value creation and value proposition processes) and/or word-of-mouth activities (recommending products or brands and sponsoring prospects to become customers).

Co-creation is a concept created by C.K. Prahalad (2004) that describes the new approach to innovation that consists of creating product and experience through collaboration with consumers, suppliers, other companies, and channel partners interconnected in a network favorable for innovation. As one of the manifestations of customer engagement (Bijmolt et al., 2010), value co-creation with customers in product development has become a strategic imperative for companies (Verleye, 2015). In the context of product development, co-creation can be defined as “a collaborative new product development activity in which consumers actively contribute and select various elements of a new product offering” (O’Hern and Rindfleisch, 2009). For companies, the rationale behind is to harness the creative potential of their customers in new product/service development in order to uncover the latent and hidden needs of customers. Although different from the concepts of participation and involvement, customer engagement in value co-creation requires participation, involvement, and commitment. Participation has been defined by Bolton and Saxena-Iyer (2009) as the degree to which customers produce and deliver service. Involvement is an individual’s level of interest and personal relevance in relation to a focal object/decision in terms of his or her basic values, goals, and self-concept (Mittal, 1995). As for commitment, it is a fact of valuing an ongoing relationship with specific other parties so as to warrant maximum efforts at maintaining it, i.e., a desire to maintain the relationship (Moorman, Rohit, and Gerald, 1993).

## 2.2 Customers’ Motivations to Engage in Co-Creation and the Drivers of Customer Engagement in Value Co-Creation

Co-creation is considered as an important manifestation of customer engagement behaviors (Fernandes and Remelhe, 2016). The latter is defined as ‘customers’ behavioral manifestations toward a brand or a firm, beyond purchase, resulting from motivational drivers (Van Doorn et al., 2010). To date, the motivations of the customers are considered as the drivers of customer engagement and value co-creation. Jaakkola and Alexander (2014) posit that customer engagement behaviors are exclusively driven by the customers' own purposes and intentions instead of those generated by the firm. Customers' motives to engage in co-ideation, co-creation, or word-of-mouth activities arise from the customer's evaluation of the costs compared to the benefits (Hoyer et al, 2010), from pecuniary motives (Zwass, 2010), from social motives (Antikainen, 2011) and egocentric, altruistic, and opportunity- (or goal-) related motives (Roberts et al. 2014) or generally from a combination of intrinsic and extrinsic motives (Vivek et al, 2012; Fuller, 2010). Those motives, however, are usually analyzed from the customer's side and the ability of the companies or brands to engage customers in innovation opportunities and the agility of the brands in this sense in the marketplace is not really considered. Nevertheless, research has shown that customer behavior may be influenced by the brand's actions in the minds and hearts of customers (Keller, 2013: 69). The brands’ efforts to get the customers motivated and engaged may influence the perceptions, feelings and interests of the customers and can influence the hedonic and altruistic value (Holbrook, 2006), functional, emotional and conditional value (Sheth, Newman, and Gross, 1991), as well as social value (Sheth et al., 1991; Holbrook 2006) that customers derive from co-creation.

We believe that perceived brand innovativeness, customer-based brand equity, relationship equity and brand literacy mainly drive emotional, cognitive and behavioral customer engagement and the willingness of customers to engage in co-ideation during idea generation, in co-creation during concept and product development and in WOM activities during market test and commercialization. Eisingerich and Rubera (2010) found a direct relationship between innovativeness and the commitment of the consumer toward the brand and perceived brand innovativeness exercise a significant impact on consumers' brand-related "immersion" which is the cognitive dimension of customer brand engagement (Hollebeek and Chen, 2014). In Keller's (2013) Customer-Based Brand Equity (CBBE) model, Brand Resonance referred to as how much of a connection customers would like to have with a brand and manifested through intense, active loyalty constitutes a central component of CBBE perhaps one of the most important influencers of customer behavior towards a brand. Relationship Equity, the customer's tendency to stick with the brand, above and beyond objective and subjective assessments of its worth (Lemon et al., 2001) increases affinity between the company and the customers. The perceived value of the special treatments and the particular relationships with the brand can be sources of co-creation motivations.

Bengtsson (2006) defines brand literacy as "the ability of the consumer to decode the strategies used in marketing practices in introducing, maintaining and reformulating brands and brand images, which then, further enables the consumer to engage with these processes within their cultural settings". In other words, brand literacy not only expresses how well the consumers are able to "read," understand, and engage with brands and brand messages (Schroeder et al., 2014) but also expresses the ability to extract and process complex meanings in a socio-cultural context (Bernardo 2000), and relates to the brand's contemporary status with regard to their consumption preferences.

Some brands are more effective in engaging their customers and possess qualities that enable them to outperform their competitors or the other companies in the marketplace. There are resources, conditions or business functions that influence the success or the optimization of their co-creation or collaborative product innovation strategies. Therefore, identifying both the brand based and customer based driving factors of customer engagement in value co-creation is crucial in order to maximize the compelling reason for potential contributors to participate in co-creation activities. In order to do so, companies primarily need to find out what consumers expect from co-creation (Fernandes and Remelhe, 2016) and what are the brands' efforts that influence those motivations.

### **3. Research Methodology**

#### **3.1 Data Collection**

Data were collected through a pair-wised comparison questionnaire based on AHP preference scales that range from 1 to 9 (from equally important to extremely important). The pair-wised comparisons were made between the criteria affecting customer engagement (perceived brand innovativeness, customer-based brand equity, brand literacy and relationship equity) and the sub-criteria that constitute them. The questionnaire was filled by respondents who have already performed one the following activities: making reviews on purchased products, being part of a brand community, providing ideas about a new product or service, having participated in a Crowdsourcing contest, recommending new products or services, blogging about a brand as soon as its new products or services become available.

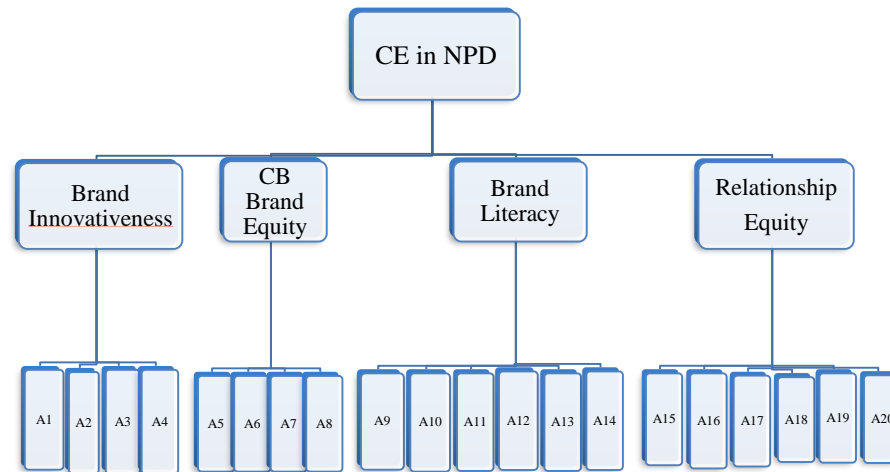
Before launching the final questionnaire, university students were asked to pre-test the questionnaire. An online link and attached files of the questionnaire were sent to the participants by email or WeChat according to what is convenient for them. The students gave feedback about the wording, definition of the concepts and other aspects of the survey they did not fully understand or had problems to deal with. Changes were made in the final survey based on the feedback. The final questionnaire generated 109 usable responses.

#### **3.2 Data Analysis**

Analytical Hierarchy Process (Saaty, 1980) was used to prioritize and rank the factors influencing local customers' motivations to engage in foreign brands' NPD. The AHP method was developed to solve complex multi-criteria problems. Tsai et al., (2008) used it to measure organizational innovativeness in a high-tech industry, where technical and administrative innovation served as the indicators for R&D ranking. The advantages of AHP over other multi-criteria methods are its flexibility, its intuitive appeal to decision makers, and its ability to check for inconsistencies. AHP helps capture both subjective and objective evaluation measurements and reduces bias in decision-making. AHP consists of the following steps:

##### **- Model Construction**

The first step of the analysis consists in structuring the decision problem of measuring Customer Engagement drivers and making a conceptual representation of the decision. This refers to the goal that is to be achieved, the criteria being evaluated and the sub-criteria to evaluate those criteria. The later were identified during a previous study in a confirmatory factor analysis that confirmed the measurement model of drivers of customer engagement willingness in co-ideation, co-creation and word-of-mouth activities (Mane, 2016).



**Figure 1:** AHP Conceptual Representation of the Decision

The first row represents the objective: what are the most important factors that drive local customers' willingness to engage and co-create value with foreign brands? The second row represents the criteria. And the final row represents the sub-criteria.

A1: Providing brand new products or services on an ongoing basis

A2: Applying regular changes in products and services

A3: Providing new experiences for the end-users

A4: Being a leader in technology

A5: Brand name awareness

A6: Brand knowledge

A7: Brand associations or brand image

A8: Brand loyalty

A9: the ability to read, understand, and engage with brands and brand messages.

A10: the ability to decode marketing practices within their cultural settings

A11: the ability to relate to the brand's contemporary status with regard to your consumption preferences

A12: the cultural signs and socio-cultural meanings a brand associates with individual and collective identities

A13: the social context in which a particular brand is constructed

A14: the ability to extract and process complex meanings of a brand in a socio-cultural context

A15: Commitment to a brand as a community member

A16: Receiving special offers from a brand

A17: Being a brand fan

A18: Receiving update and exchange correspondence

A19: Being proud to use the brand

A20: Identifying with the other users of the brand

#### - Prioritization Procedure

The prioritization procedure consists in first creating a criteria comparison matrix to determine the relative priorities of the criteria in meeting the goal and then the relative scoring of the several sub-criteria on the criteria.

#### - Normalizing and calculating the criteria weights {W}

We first need to find the consistency vector and determine its average and then determine the consistency index. We can then divide each element in every column by the sum of that column and find the average of each row in the normalized matrix. This enables to make a ranking of the priorities.

#### - Checking the Consistency Ratio

The validity of the model is verified using the Consistency Ratio (CR) of the pair-wised comparison matrices. To calculate it, we first need to determine the consistency index and look up the value for the random index, which is the

consistency index for an  $n \times n$  matrix if the pair wise comparisons were completely random. If the CR is no greater than 0.10, the pair-wise comparison matrix is (or matrices are) generally acceptable. An acceptable consistency ratio helps to ensure decision-maker reliability in determining the priorities of a set of criteria or sub-criteria. To deal with inconsistent judgments, we took a couple of measures. The first measure to keep inconsistencies low was to keep the number of criteria between 5 and seven as recommended by Miller (1956) and taken up by Saaty and Ozdemir (2003). Another measure consisted of analyzing the responses individually in order to check the consistencies. For the cases that represented a CR greater than 10%, the respondents were asked to adjust their judgments in direction of the most consistent input of the pair-wise comparisons. A slight adjustment of intensities up or down was usually done to deal with the issue.

## 4. Research Results

### 4.1 Prioritization at the Criteria Level

The relative priorities of the criteria in meeting the goal are represented in the comparison matrix as indicated in Table 1.

**Table 1:** Comparison matrix of the criteria

	BI	BE	BL	RE
BI	1	4	3	2
Brand equity	1/4	1	3	1/3
BL	1/3	1/3	1	1/4
RE	1/2	3	4	1
$\sum bkj$	2.08	8.33	11.00	3.58

The Weights are calculated from the comparison matrices. After putting the values in each cell of the matrix the first step consists in summing up the value of each column ( $\sum bkj$ ). After the summations of values of the columns would be equated, each column summation is divided by the total sum of the columns to find the weights of the criteria as indicated in table 2.

**Table 2:** Weights calculation and normalization

	BI	BE	BL	RE	Weight	Normalization
Brand innovativeness	0.48	0.48	0.27	0.56	1.79	0.45
Brand equity	0.12	0.12	0.27	0.09	0.61	0.15
Brand literacy	0.16	0.04	0.09	0.07	0.36	0.09
Relationship equity	0.24	0.36	0.36	0.28	1.24	0.31
					4.00	

As indicated by SESUG (2012), the priority (known as normalized, principal eigenvector) column is the relative ranking of the criteria produced by dividing each element of the matrix with the sum of its column. Next, the average across the rows is computed. The sum of priority criteria vector is one. The largest value in the priority weight is the most important criterion (Brand Innovativeness with a weight 0.45 or 45%).

**Table 3:** Priority weights calculation

	BI	BE	BL	RE	W	W	W	W	Bwi
Brand innovativeness	1	4	3	2	0.45	0.15	0.09	0.31	1.95
Brand equity	1/4	1	3	1/3	0.45	0.15	0.09	0.31	0.64
Brand literacy	1/3	1/3	1	1/4	0.45	0.15	0.09	0.31	0.37
Relationship equity	1/2	3	4	1	0.45	0.15	0.09	0.31	1.35

To evaluate the consistency of the obtained result, three components are needed from the analysis namely the Eigen value ( $\lambda_{max}$ ), the Consistency index (CI) and the Random consistency Index (RI).  $\lambda_{max}$  (4.24) is an Eigen value scalar that solved the characteristic equation of the input comparison matrix. Ideally, the  $\lambda_{max}$  value should equal the number of factors in the comparison ( $n=4$ ) for total consistency.



$$\lambda_{\max} = (\text{Cell value } 1 \times \text{Obtained weight } 1) + (\text{Cell value } 2 \times \text{Obtained weight } 2) + \dots + (\text{Cell value } (n - 1) \times \text{Obtained weight } (n - 1)) + (\text{Cell value } n \times \text{Obtained weight } n)$$

Where  $n \times n$  is the matrix size.

**Table 4:** Consistency ratio calculation

B <sub>wi</sub> /W <sub>i</sub>	4.34
	4.21
	4.08
	4.34
sum/n= $\lambda_{\max}$	4.24
CI= $(\lambda_{\max} - n) / (n - 1)$	0.08
<b>CR</b>	<b>0.09</b>

The consistency index  $CI = (\lambda_{\max} - n) / (n - 1)$  measures the degree of logical consistency among pair-wise comparisons. The random index (RI) is the average CI value of randomly generated comparison matrices using Saaty’s preference scale. The Consistency ratio (CR) indicates the amount of allowed inconsistency (0.10 or 10%). Higher numbers mean the comparisons are less consistent. Smaller numbers mean comparisons are more consistent or acceptable. CRs above 0.1 means the pair-wise comparison should be revisited or revised (SESUG, 2012)

The CR is 0.09 and is within the accepted range of the allowed amount.

The table indicates the rankings of the criteria.

**Table 5:** Criteria Ranking

Category		Priority	Rank
1	Brand Innovativeness	45%	1
4	Relationship Equity	31%	2
2	CBBE	15%	3
3	Brand Literacy	9%	4

## 4.2 Prioritization at the Sub-criteria Levels

### - Brand Innovativeness

Calculating the weights and testing the consistency for each level

**Table 6:** Weights calculation and normalization

	A1	A2	A3	A4	Weight	Norma.
A1	0.49	0.64	0.49	0.34	1.95	0.49
A2	0.10	0.13	0.18	0.25	0.65	0.16
A3	0.23	0.17	0.23	0.28	0.91	0.23
A4	0.19	0.07	0.10	0.13	0.49	0.12
					4.00	

The largest value in the priority weight is the most important criterion

**Table 7:** Consistency ratio calculation

Bwi/Wi	4.30
	4.11
	4.12
	4.08
sum/n= $\lambda_{max}$	4.15
CI= $(\lambda_{max}-n)/(n-1)$	0.05

$\lambda_{max} = (4.15)$

CI= 0.05

CR= 0.06

The consistency ratio is  $0.06 < 0.1$ . Therefore, the comparisons are acceptable, consistent

**Table 8:** Ranking of the brand innovativeness sub-criteria

Category	Priority	Rank
1 A1	49%	1
3 A3	23%	2
2 A2	16%	3
4 A4	12%	4

**A1:** Providing brand new products or services on an ongoing basis

**A3:** Providing new experiences for the end-users

**A2:** Applying regular changes in products and services

**A4:** Being a leader in technology

**- Customer-Based Brand Equity**

The same analytical process has been applied to the sub-criteria CBBE

**Table 9:** Weights calculation and normalization

	A5	A6	A7	A8	Weight	Norm.
A5	0.38	0.60	0.34	0.24	1.55	0.39
A6	0.13	0.20	0.31	0.39	1.03	0.26
A7	0.20	0.11	0.18	0.19	0.67	0.17
A8	0.30	0.09	0.18	0.19	0.75	0.19
					4.00	

The largest value in the priority weight is the most important criterion

**Table 10:** Consistency ratio calculation

Bwi/Wi	4.45
	4.21
	4.19
	4.15
sum/n= $\lambda_{max}$	4.25
CI= $(\lambda_{max}-n)/(n-1)$	0.08

$\lambda_{max} = (4.45)$

CR= 0.09

The consistency ratio is less than 0.1. Therefore, the comparisons are acceptable, consistent



**Table 11:** Ranking of the Customer-Based Brand Equity sub-criteria

Category		Priority	Rank
1	A5	39%	1
2	A6	26%	2
4	A8	19%	3
3	A7	17%	4

**A5:** Brand name awareness

**A6:** Brand knowledge

**A8:** Brand loyalty

**A7:** Brand associations or brand image

**- Brand Literacy**

**Table 12:** Weights calculation and normalization

	A9	A10	A11	A12	A13	A14	W	Norm.
A9	0.37	0.52	0.28	0.31	0.36	0.28	2.11	0.35
A10	0.10	0.15	0.26	0.24	0.15	0.18	1.08	0.18
A11	0.16	0.07	0.12	0.24	0.10	0.09	0.77	0.13
A12	0.10	0.05	0.04	0.09	0.15	0.20	0.64	0.11
A13	0.16	0.15	0.18	0.09	0.15	0.17	0.90	0.15
A14	0.11	0.07	0.12	0.04	0.08	0.09	0.50	0.08
							6.00	

The largest value in the priority weight is the most important criterion

**Table 13:** consistency ratio calculation

Bwi/Wi	6.53
	6.53
	6.53
	6.21
	6.36
	6.30
sum/n= $\lambda_{max}$	6.41
CI= $(\lambda_{max}-n)/(n-1)$	0.08

$\lambda_{max}$ = (6.41) and CI= 0.08

CR= 0.07

The consistency ratio (CR) is  $0.07 < 0.1$ . Therefore, the comparisons are acceptable, consistent

**Table 14:** Ranking of the Brand Literacy sub-criteria

Category		Priority	Rank
1	A9	35%	1
2	A10	18%	2
5	A13	15%	3
3	A11	13%	4
4	A12	11%	5
6	A14	8%	6

**A9:** the ability to read, understand, and engage with brands and brand messages.

**A10:** the ability to decode marketing practices within their cultural settings

**A13:** the social context in which a particular brand is constructed

**A11:** the ability to relate to the brand’s contemporary status with regard to your consumption preferences

**A12:** the cultural signs and socio-cultural meanings a brand associated with individual and collective identities

**A14:** the ability to extract and process complex meanings of a brand in a socio-cultural context

**- Relationship Equity**

**Table 15:** Weights calculation and normalization

	A15	A16	A17	A18	A19	A20	Weight	Norm.
A15	0.36	0.56	0.33	0.26	0.25	0.23	1.99	0.33
A16	0.12	0.18	0.36	0.30	0.22	0.23	1.41	0.24
A17	0.17	0.08	0.15	0.27	0.24	0.19	1.09	0.18
A18	0.12	0.05	0.05	0.09	0.16	0.16	0.62	0.10
A19	0.12	0.07	0.06	0.05	0.09	0.13	0.52	0.09
A20	0.11	0.05	0.05	0.04	0.04	0.07	0.36	0.06
							6.00	

After the summations of values of the columns would be equated, each column summation is divided by the total sum of the columns to find the weights of the criteria. The largest value in the priority weight is the most important criterion.

**Table 16:** Consistency ratio calculation

Bwi/Wi	6.67
	6.64
	6.39
	6.16
	6.20
	6.29
sum/n= $\lambda_{max}$	6.39
$CI=(\lambda_{max}-n)/(n-1)$	0.08

$\lambda_{max} = (6.39)$

CI= 0.08

The consistency ratio is  $0.06 < 0.1$ . Therefore, the comparisons are acceptable, consistent

**Table 17:** Ranking of the Relationship Equity sub-criteria

Category	Priority	Rank
1   A15	33%	1
2   A16	24%	2
5   A19	18%	3
3   A17	10%	4
4   A18	9%	5
6   A20	6%	6

**A15:** Commitment to a brand as a community member

**A16:** Receiving special offers from a brand

**A19:** Identifying with the other users of the brand

**A17:** Being a brand fan

**A18:** Receiving update and exchange correspondence

**A20:** Being proud to use the brand

## 5. Conclusions, Implications and Research Limitations

### 5.1 Conclusions

This paper has attempted to analyze the relative importance of perceived brand innovativeness, customer-based brand equity, relationship equity and brand literacy as factors that influence Chinese customers' willingness to engage in co-creation and new product development activities with foreign brands. The factors mentioned above are relatively compared to each other through pair-wised comparisons based on the Analytical Hierarchy Process scales. The results show that, when deciding to engage in co-creation customers first consider the ability of the brand to innovate (brand innovativeness), followed by relationship equity (the quality or the type of the relationship the customer has with the brand), then by customer-based brand equity (what resides in the minds and hearts of customers (Keller, 2013: 69) as a consequence of their experiences over time and what customers have learnt, felt, seen, and heard about the brand), and brand literacy (the ability to engage with the brand messages).

Within brand innovativeness, the most important criteria are respectively: providing brand new products or services on an ongoing basis, providing new experiences for the end-users, applying regular changes in existing products and services and being a leader in technology. Within relationship equity, the most important criteria are respectively: being committed to a brand as a brand community member, receiving special offers from a brand, identifying with the other users of a brand, being a brand fan, receiving update and exchange correspondence and being proud to use the brand. Within customer-based brand equity, the most important criteria are respectively: brand-name awareness, brand knowledge, brand loyalty and brand associations and brand image.

Finally within brand literacy, the most important criteria are respectively: the ability to read, understand, and engage with brand messages, the ability to decode marketing communications within their cultural settings, the social context in which a particular brand is constructed, the ability to relate to the brand's contemporary status with regard to consumption preferences, the cultural signs and socio-cultural meanings associated with individual and collective identities and the ability to extract and process complex meanings of a brand in a socio-cultural context.

### 5.2 Research Implications

The present study has theoretical, practical as well as managerial implications. Theoretically, this research draws new features on the existing literature on customer engagement and brand management to provide new perspectives about the drivers and intervening factors affecting customer engagement willingness in new product development and value co-creation in China. This paper provides insights on cross-cultural and country-specific customer brand engagement. The increasing pace of globalization of consumer markets combined with the belief that culture-driven differences impact on the way in which customers respond to customer engagement tactics (Nijssen and Douglas, 2011; Bang et al, 2014) provide a rationale to investigate the brand-based drivers as well as the customer-based drivers of customer value co-creation behavior. Moreover, testing a theory in an emerging economy is all the more important as it provides a new perspective on the theory, taking into consideration the sufficient contextual information that a new market may offer (Wright *et al.*, 2005).

Practically, this research could help managers understand the main brand-based factors that may have an impact on the dimensions of customer brand engagement and identify business best practices in China's context. Through a ranking of the factors, this research could help them make strategic decisions about the resources they should deploy to optimize customers' active engagement in new product development and innovation activities.

As managerial implications, this study suggests that in China, to drive customer engagement in NPD and value co-creation, companies need to emphasize on how customers perceive their capacity and efforts to innovate in product quality, design, features, and services as well as their capacity to convey about the value claimed by the offer. They also need to focus on how to build strong relationships with the customers. Co-creating with a brand requires close consumer-brand interactional relationships. The perceptions that customers have on brands depend mostly on the type of relationships customers have with that brand. In a nutshell, companies need to build strong brands that customers are aware of and that have good meanings in the minds and hearts of the customers. Even if culture plays an important role in shaping customers' perceptions, customer experience and value derived from the capacity of the brand to innovate, from relationship equity and CBBE seem to be more important for customers when deciding to engage in value co-

creation. Managers should, therefore, work on enhancing their innovation capacities, building strong relationships and reinforcing CBBE.

### 5.3 Research Limitations and Future Research

This research is subject to some limitations. First, the limited sample size could prevent the study to be generalized. The study could be conducted on a larger sample size given the size of the population and the possible sample frames. Second, the analysis is only limited to the prioritization of factors. A complete AHP model such as a fuzzy AHP model could be used in an attempt to determine the preferred mode of engagement or the preferred stage of engagement between co-ideation, co-creation or WOM activities or at which stage of the NPD process, the front-end stages or the back-end stages.

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