

Chinese consumers and European beer: Associations between attribute importance, socio-demographics, and consumption

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- Explores the influencing factors for European beer consumption in China
- Origin, Price and Colour are key product attributes
- Gender, financial situation and occupation are key socio-demographic factors
- Frequent beer drinkers are inclined to consume more European beer in China
- Germany is associated with European beer by most of Chinese consumers

1 **Chinese consumers and European beer: Associations between**
2 **attribute importance, socio-demographics, and consumption**

3

4 **Abstract**

5 The demand for western alcoholic beverages in China has increased
6 tremendously in recent years. However, there is still a lack of understanding with regard
7 to the behaviour of Chinese consumers towards European beer, which is a common
8 Western alcoholic beverage. This study explores associations between beer attribute
9 importance scores, socio-demographic factors, general beer consumption frequency
10 and country associations of European beer, and the consumption of imported European
11 beer in China. The data (n= 541) were collected in two Chinese cities: Shanghai and
12 Xi'an. Results of ordered logistic regression analyses show that the consumption of
13 imported European beer is positively associated with product attributes *Origin, Brand,*
14 *Colour* and *Texture*, and it is negatively linked to *Price* and *Alcoholic content*.
15 Furthermore, male gender, living in Shanghai city, a good financial situation, frequent
16 beer consumption and a high-level employment position have a significantly positive
17 influence on European beer consumption in China. In addition, about two thirds of the
18 study participants associate imported European beer with 'Germany'.

19

20 **Keywords**

21 China; Consumer; European beer; Attributes; Socio-demographics

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26 **1. Introduction**

27 **1.1. Research background**

28 China is one of the most important emerging markets and the largest East-Asian
29 country, as it has 20% of the World's population and is experiencing rapid growth in
30 personal income (World Bank, 2014). An enormous number of Chinese study, work or
31 travel in western countries and bring back their experiences of western foods (Netease,
32 2013; Yan, 2014). The dietary consumption pattern in China is also becoming more
33 inclined towards westernization (Pingali, 2007). Together, these factors have led to the
34 recent dramatic growth in demand for imported Western food products (Curtis,
35 Mccluskey, & Wahl, 2007; Gale & Huang, 2007; Hu, Cox, & Edwards, 2007; Liu,
36 Smith, Liesch, Gallois, Ren & Daly, 2011; Wang, De Steur, Gellynck, & Verbeke,
37 2015; Wang, Gellynck, & Verbeke, 2015). In particular, there is a huge demand for
38 western alcoholic beverages, especially originating from Europe. China now represents
39 the largest export market for wine from the European Union (EU), and above 70% of
40 its imported beer comes from European countries (Alinna, 2013; Chen, 2015; Lu,
41 2014). This new trend brings an increased importance to the research areas in relation
42 to East-Asian (especially Chinese) consumers' attitudes, perceptions and behaviours
43 towards local Western alcoholic beverages.

44 Many empirical studies exploring East-Asian consumer behaviour, attitudes and
45 perceptions towards western alcoholic beverages have used wine as their focus
46 (Balestrini & Gamble, 2006; Bruwer & Buller, 2012; Bruwer, Buller, John Saliba, &
47 Li, 2014; Camillo, 2012; Goodman, 2009; Hu, Li, Xie, & Zhou, 2008; Lee & Chang,
48 2014; Pan, Fang, & Malaga, 2006; Somogyi, Li, Johnson, Bruwer, & Bastian, 2011;
49 Wen, Tong, & Yao, 2010; Wilson & Huang, 2003; Yoo, Saliba, MacDonald, Prenzler,
50 & Ryan, 2013; Yu, Sun, Goodman, Chen, & Ma, 2009). However, there is still a lack

51 of understanding with regard to East-Asian consumers' (especially Chinese
52 consumers') behaviours, perceptions and attitudes towards another typical western
53 alcoholic beverage – European beer.

54 European beers have a vast range of tastes, appearances and other sensory
55 characteristics, that are due to the different local ingredients and brewing traditions used
56 (Persyn, Swinnen, & Vanormelingen, 2011; Poelmans & Swinnen, 2011; Swinnen &
57 Vandemoortele, 2011; Tremblay, Tremblay, & Swinnen, 2011). This resulting
58 assortment of beers is very different from China's domestic beers that have a relatively
59 homogeneous range of pale lagers sharing the characteristics of mild taste, pretty
60 meager alcohol content, large bottle size and low price (Bai, Huang, Rozelle, Boswell,
61 & Swinnen, 2011; Vernon, 2013).

62 **1.2. Research objective**

63 The present study focuses on a previously unexplored area, namely
64 associations between attribute importance, socio-demographics, and European beer
65 consumption in China. Because of their role in shaping consumers' beer choice as
66 shown by previous studies, our study will focus on general beer consumption frequency
67 and the perceived importance of the attributes *Price, Brand, Origin (local, national or*
68 *international), Varied assortment, Alcohol content, Calorie content, Appearance (e.g.*
69 *package and bottle), Colour, Taste, Availability, Smell, Hangover effect (hangover in*
70 *the next morning or not) and Texture (the weight of a beer as perceived in the mouth,*
71 *such as thin or full texture)* (Empen & Hamilton, 2013; Guinard, Uotani, & Schlich,
72 2001; Makindara, Hella, Erbaugh, & Larson, 2013; McCluskey, Shreay, & Swinnen,
73 2011; Mejlholm & Martens, 2006; Phau & Suntornnond, 2006; Wright, Bruhn,
74 Heymann, & Bamforth, 2008; Yang, Mizerski, Lee, Liu, Olaru, & Chua, 2012). In
75 addition, socio-demographic factors such as *gender, age, income and regional groups*

76 (Colen & Swinnen, 2015; Gabrielyan, McCluskey, Marsh, & Ross, 2014; Guinard, et
77 al., 2001; Makindara et al., 2013; Yang. et al., 2013; McCluskey et al., 2011; Millwood,
78 Smith, Guo, Yang, Bian, & Collins, 2013) will be taken into account. Furthermore, as
79 country image or country-of-origin has a strong effect on purchase intention towards
80 foreign products among Chinese consumers (Wang, Li, Barnes, & Ahn, 2012), our
81 study will also explore the countries linked to European beer in our Chinese study
82 sample.

83 **2. Methods and materials**

84 **2.1. *Participants and procedures***

85 A questionnaire was developed in English and translated into Chinese.
86 Two rounds of online pilot tests were undertaken with Chinese participants living in
87 China and working in Belgium to improve the survey design and the language
88 translation. The final version was programed to a web-based questionnaire and sent to
89 registered members of a consumer panel maintained by a Chinese market research
90 agency, using strict identification verification and a financial incentive. Data collection
91 was performed in December 2013. A quota sampling method was applied by using
92 gender (male and female), age (19-30, 31-40, above 40 years of age) and cities (Xi'an
93 and Shanghai) as dimensions for quota stratification (Fabinyi, Liu, Song, & Li, 2016).
94 The selection of the two cities for this study was based on their different locations, level
95 of personal income, development level and degree of influence by western cultures.
96 Southern and northern regions of China have obvious differences in terms of dietary
97 habits and lifestyle (He, 2013; Sun, 2012). There are differences in consumption
98 behaviour and the degree of influence by western cultures between highly developed
99 regions in China and those that are less developed (Liu et al., 2011; Sun & Collins,
100 2004). Shanghai is in the southern region of China, and is an international metropolis

101 with the greatest exposure to western cultures and products like imported beers.
102 Shanghai has the highest level of development and personal income compared to other
103 Chinese cities (Liu et al., 2011; National Bureau of Statistics of the People's Republic
104 of China, 2013; Zhao, 2003). Conversely Xi'an, which is in the northern region, is a
105 traditional and historic city which is less developed and has much lower levels of
106 personal income (Liu et al., 2011; National Bureau of Statistics of the People's Republic
107 of China, 2013; Zhao, 2003). Additionally, there are different beer consumption
108 preferences between southern and northern Chinese cities (Millwood et al., 2013).

109 A total of 541 valid responses were obtained. Of these 259 participants were
110 from Shanghai and 282 from Xi'an. Table 1 provides details of their socio-demographic
111 characteristics, including age, gender, region, financial situation, occupation and
112 education. Due to the online data collection method, the sample was biased towards
113 highly educated people, with 80.6% of the participants having a bachelor or higher
114 degrees.

115 >> Insert Table 1

116 **2.2. Measures**

117 Participants were asked to evaluate the importance of thirteen product attributes
118 for beer choice: *Price, Brand, Origin, Varied assortment, Alcohol content, Calorie*
119 *content, Appearance, Colour, Taste, Availability, Smell, Hangover effect and Texture.*
120 These product attributes were described in previous studies in relation with beer
121 consumption behaviour (Empen & Hamilton, 2013; Makindara et al., 2013; McCluskey
122 et al., 2011; Mejlholm & Martens, 2006; Mizerski et al., 2012; Guinard et al., 2001;
123 Phau & Suntornnond, 2006; Wright et al., 2008; Yang et al., 2012). The question stated:
124 “... *is important for me to choose a beer.*” A seven-point Likert agreement scale was
125 employed for the response categories: 1= disagree strongly, 2= disagree moderately, 3=

126 disagree slightly, 4= neither agree nor disagree, 5= agree slightly, 6= agree moderately,
127 and 7= agree strongly.

128 Participants' past consumption experience with imported European beer was
129 measured using the question: "*How would you describe your consumption of imported*
130 *European beer?*" The response categories were: 1= I have never consumed and will
131 never consume it, 2= I have never consumed it but I am open to consume it, 3= I stopped
132 consuming and would never consume it again, 4= I stopped consuming it but consider
133 to consume it again, 5= I consume it sometimes (less than once a month), 6= I consume
134 it often (more than once a month). This measurement scale was employed as imported
135 European beer is not a commonly consumed product for mainland Chinese consumers
136 compared to their domestic beer (Chen, 2015; Lu, 2014). Participants were also asked
137 to provide their overall beer consumption frequency in the past 14 days. The response
138 categories ranged from 0 = never to 14 = daily or 14 out of 14 days.

139 An open-ended question was used to elicit participants' country associations for
140 imported European beer: "When you think about imported European beer, which
141 country does first come into your mind?" Participants were asked to input only one
142 country's name as their response.

143 The financial situation of households was self-assessed by participants on a
144 seven-point interval scale ranging from 'difficult' to 'well off' in line with a previous
145 study (Pieniak, Verbeke, Vanhonacker, Guerrero, & Hersleth, 2009). The education
146 level was measured by means of a seven-point ordinal scale with response categories:
147 1= Primary school and below, 2= Secondary school, 3= High school/Polytechnic
148 school, 4= Junior college, 5= Bachelor degree, 6= Master degree and 7= Doctoral
149 degree and above.

150 The measure of occupation had eleven response categories: 1= Self-employed
151 farmer, 2= Self-employed in general, 3= Managing employee, 4= Salaried employee,
152 5= Skilled worker, 6= Unskilled worker, 7= Student, 8= Retired 9= Unemployed or on
153 leave, 10= Housewife/houseman, 11= Other.

154 **2.3. Data analysis**

155 The statistical software tools SPSS 22.0 and Stata 14 were used to perform the
156 data analyses in this study. First, descriptive statistics were presented as mean values,
157 standard deviations, percentages or frequencies for product attribute importance,
158 European beer consumption, beer consumption frequency, country associations, and
159 socio-demographic groups (SPSS 22.0). Next, cross-tabulation with χ^2 was used to test
160 statistical differences between groups based on country association, and European beer
161 consumption (SPSS 22.0). Finally, ordered logistic regression models (followed by
162 Wald tests) were carried out (Stata 14) in line with the ordinal nature of the dependent
163 variable, namely European beer consumption. Results of the models are reported as
164 odds ratio with 95% confidence intervals (De Boer, Schösler, & Aiking, 2014; Eboli &
165 Mazzulla, 2009; Liu, Hoefkens, & Verbeke, 2015; Pérez-Cueto, Verbeke, de Barcellos,
166 Kehagia, Chrysochoidis, Scholderer, & Grunert, 2010; Verbeke, 2015). An odds ratio
167 above 1 indicates a positive effect of the explanatory variable on the dependent variable;
168 while an odds ratio below 1 indicates a negative effect of the explanatory variable on
169 the dependent variable (Liu et al., 2015; Verbeke, 2015). Model 1 was used to identify
170 the factors associated with European beer consumption in the total sample, by
171 associating European beer consumption with product attribute importance for beer
172 choice, country association groups, beer consumption frequency and socio-
173 demographic factors. Models 2 to 7 were meant to assess the similarities and differences

174 in terms of associations with European beer consumption between gender groups, city
175 groups, and country association groups.

176 **3. Results**

177 **3.1. Description of variables**

178 The description of the different variables used in this study is presented in Table
179 2. Firstly, the mean values for product attribute importance ranged from 4.67 to 5.96 on
180 the 7-point scale. The highest mean values are observed for *Texture* and *Taste*; while
181 the lowest mean values are observed for *Calorie content* and *Colour*. Secondly, overall
182 beer consumption frequency was recoded into an ordinal variable with six categories,
183 due to the low number of participants reporting a consumption frequency of 4-14 days
184 on the original scale. Thirdly, the European beer consumption was recoded into an
185 ordinal variable with four categories, due to the low number of participants in the
186 original response categories ‘I have never consumed and will never consume it’ and ‘I
187 stopped consuming and would never consumed it’. Fourthly, the financial situation was
188 recoded into an ordinal variable with five categories merging the original response
189 categories ‘Difficult’ and ‘Moderate’. Fifthly, the education level was recoded into an
190 ordinal variable with three response categories. Sixthly, occupation was recoded into a
191 five-point categorical variable. Seventhly, as the country associations were dominated
192 by ‘Germany’ (64.7% of the total sample), this information was recoded into a binary
193 variable: ‘Country association (Germany)’, with 1= Germany and 0= non-Germany.
194 Finally, gender and city were analysed as binary variables: ‘Gender (male)’ and ‘City
195 (Shanghai)’, with the value of ‘1’ for male and Shanghai and ‘0’ for female and Xi’an,
196 respectively.

197 >> Insert Table 2

198

199 **3.2. Country associations for imported European beer**

200 A total of 18 European countries were named as a result of the country
201 association test (Figure 1). Germany dominated the country associations; this country
202 was mentioned by 350 participants (64.7% of total sample). None of the other countries
203 mentioned reached a share of more than 10% of the total number of associations.

204 Participants were classified into two sub-sample groups based on their country
205 associations: Germany and Non-Germany. Table 3 provides the socio-demographic
206 characteristics of these two sub-sample groups, including age, gender, region, financial
207 situation, occupation and education. Cross-tabulation with χ^2 tests reveals significant
208 differences between the two sub-sample groups for gender and occupation. The sub-
209 sample group ‘Germany’ has an even gender distribution, with a higher percentage of
210 managing employee participants and a lower percentage of working class participants
211 compared to the group ‘Non-Germany’. In addition, the ‘Non-Germany’ group
212 included a significantly higher percentage of female participants (67%).

213 >> Insert Figure 1

214 >> Insert Table 3

215 **3.3. Regression results for the total sample model (Model 1)**

216 Table 4 shows the results of the ordered logistic regression model 1, with the
217 imported European beer consumption as dependent variable and conducted for the total
218 sample (n= 541). Its explanatory variables include fourteen interval-scaled variables
219 (13 product attribute importance ratings, and age), three binary variables (gender, city
220 and country association groups), and three ordinal variables (beer consumption
221 frequency, education and financial situation).

222 The product attribute importance variables *Origin* and *Colour*, the socio-
223 demographic variables *Gender (male)*, *City (Shanghai)* and *Financial situation*, as well

224 as *Beer consumption frequency* and *Country association (Germany)* have statistically
225 significant and positive associations with European beer consumption (odds ratio
226 values > 1 and *p*-values < 0.05). The importance of *Price* as a product attribute is
227 negatively associated with European beer consumption (odds ratio < 1 and *p*-value <
228 0.05). In other words, Chinese consumers who are more likely to consume imported
229 European beer are male, live in Shanghai, have a good financial situation, are frequent
230 beer drinkers in general, associate European beer predominantly with ‘Germany’, and
231 attach more importance to the attributes *Colour* and *Place of Origin* in relation to beer
232 choice. By contrast, Chinese consumers who attach more importance to *Price* during
233 their beer choice are less likely to drink imported European beer.

234 *Beer consumption frequency* and *Financial situation* have the strongest effect
235 in the model, as their Wald Chi² values (96.41 and 37.00) are much higher than those
236 for other explanatory variables. Furthermore, among the three product attributes with
237 statistically significant associations with European beer consumption, *Origin* (Wald
238 Chi² value= 21.89) and *Price* (Wald Chi² value= 22.93) have much stronger
239 associations than *Colour* (Wald Chi² value= 4.42).

240 >> Insert Table 4

241 **3.4. European beer consumption of sub-sample groups**

242 Table 5 shows the European beer consumption of gender, city and country
243 association groups. Cross-tabulation with χ^2 tests indicates significant differences
244 between all of the sub-sample groups. In terms of the differences between the sub-
245 sample groups, male has a higher percentage of participants who are frequent European
246 beer consumers compared to female. Table 5 shows that 43.3% of male participants
247 consume imported European beer often or sometimes. The female participant group has
248 a lower percentage of 29.3% among the frequent European beer consumers (often or

249 sometimes). Further, Shanghai and the Germany association group have higher
250 percentages of frequent European beer consumers (42.0% and 39.7%) than Xian and
251 the Non-Germany association group (29.0% and 27.2%).

252 >> Insert Table 5

253 **3.5. Regression results of the sub-sample models (models 2 to 7)**

254 Table 6 shows the results of the ordered logistic regression models 2 to 7, with
255 the imported European beer consumption as dependent variable and the product
256 attribute importance scores as explanatory variables, for the sub-samples of gender, city
257 and country association groups.

258 With regard to these models, male, female, Shanghai and the Germany group
259 have similar statistically significant results to the model for the total sample (model 1).
260 The European beer consumption is significantly associated with three product attribute
261 importance variables (*Origin* (positive), *Price* (negative) and *Colour* (positive)) in these
262 four sub-sample models (models 2, 4, 5 and 6). Additionally, the European beer
263 consumption is significantly linked to the importance attached to *Origin* (positive),
264 *Price* (negative) and *Texture* (positive) in the models for Xi'an and the Non-Germany
265 group (models 3 and 7). European beer consumption is also associated with importance
266 attached to *Brand* (positive) and *Alcoholic content* (negative) for the model of the non-
267 Germany group (model 7).

268 The strongest association is found for *Origin* in the models of Xi'an (Wald Chi²
269 value= 26.66), female (Wald Chi² value= 11.29) and the non-Germany group (Wald
270 Chi² value= 20.85); while the strongest association is seen for *Price* in the models of
271 Shanghai (Wald Chi² value= 18.00), male (Wald Chi² value= 24.17) and the Germany
272 group (Wald Chi² value= 15.46).

273 >> Insert Table 6

274 **4. Discussion**

275 This study contributes to an improved understanding of the personal factors
276 (notably perceived attribute importance, general consumption frequency, country
277 associations and socio-demographics) that associate with European beer consumption
278 among Chinese consumers. The following factors were found to be associated with
279 European beer consumption across the total Chinese sample in this study: importance
280 attached to *Price, Origin, Colour*, the socio-demographic characteristics *Gender, City,*
281 *Financial situation, Occupation* (e.g. different in *Country association groups*) and
282 overall *Beer consumption frequency*. These factors are largely similar to those that have
283 been found to drive East Asian consumer choice relating to wine in previous studies:
284 *Origin, Price, Brand, Taste, Gender, Age* and *Personal income* (Balestrini & Gamble,
285 2006; Bruwer & Buller, 2012; Bruwer et al., 2014; Camillo, 2012; Goodman, 2009; Hu
286 et al., 2008; Lee & Chang, 2014; Pan et al., 2006; Somogyi et al., 2011; Wen et al.,
287 2010; Wilson & Huang, 2003; Yoo et al., 2013; Yu et al., 2009). This indicates that
288 the factors that drive Chinese consumers' consumption of western alcoholic beverages
289 surpass specific product types, even between wine and beer. Therefore, the findings
290 from this study and those wine-studies may have reference significance for producers
291 and marketers to develop marketing strategies for other western (alcoholic) beverages
292 (e.g. whisky, fruit wine and bottled cocktails) in China (or other East Asian countries).

293 *Price* and *Origin* are the most important product attributes driving Chinese
294 consumers' European beer consumption, as having statistically significant associations
295 with the consumption of European beer in all of the models. Importance attached to
296 *Price* is negatively associated to the European beer consumption by Chinese
297 consumers. This is in line with previous studies related to beer consumption, which
298 indicated that lowering price can boost beer consumption (Empen et al., 2013; Guinard

299 et al., 2001; Makindara et al., 2013). Additionally, this finding is also in line with the
300 reality that imported beer is much more expensive than domestic beer, and it is mainly
301 aimed at the high-end market in China (Bei, 2013; Lu, 2014). Therefore, *Price* is
302 considered to be a barrier (negatively associated) to the consumption of imported
303 European beer among common Chinese consumers. However, this barrier may be lifted
304 gradually as the growth of personal income in China, the reduction of tariffs by the
305 installment of more free-trade zones established in China, and the improvement of
306 transportation infrastructure for trades on the Eurasian continent, persist, supported by
307 international organizations and policies (Kazer, 2015; Mount, 2014; Prodi & Gosset,
308 2015; Pavličević, 2015; Wheatley, 2015; Zhang, 2015).

309 *Origin* is an important factor driving Chinese consumers to buy imported
310 European beer. This corresponds with the important role of *Origin* in shaping consumer
311 behaviour towards beer or other foreign products, as described in previous studies.
312 *Origin* was shown to be an important factor for consumers to evaluate regional or
313 foreign food products before purchasing in general (Kelly, Heaton, & Hoogewerff,
314 2005; Van der Lans, Van Ittersum, De Cicco, & Loseby, 2001), and it was shown to
315 affect beer evaluations by Australian consumers in particular (Phau & Suntornond,
316 2006). *Origin* also plays an important role in the Chinese wine market, and it was the
317 most important factor for Chinese consumers to assess wine quality during purchase
318 according to the study by Balestrini and Gamble (2006).

319 The finding that *Price* is strongly associated with European beer consumption
320 among the sub-samples with the highest share of frequent European beer drinkers
321 indicate that frequent European beer drinkers are more sensitive to price; while the non-
322 frequent European beer drinkers are more likely to be attracted by a sign of *Origin* (e.g.
323 label of production country) when purchasing imported European beer in China. As

324 such, western brewers are recommended to develop marketing strategies that target
325 different consumer groups in China: using ‘Country of origin promotions’ for non-
326 frequent drinkers who are more likely to be living in second-, third-, or fourth-tier cities
327 (e.g. Xi’an and Chongqing), being female, or being people with lower-level positions
328 (e.g. workers, the non-Germany group); while providing ‘price promotions’ for
329 frequent drinkers who are more likely living in first-tier cities (e.g. Shanghai and
330 Beijing), being male, or being people with higher-level positions (e.g. managing
331 employee, the Germany group). Such strategies might also be suitable for other western
332 alcoholic beverages in the Chinese market.

333 European beer consumption is positively associated with the importance
334 attached to the sensory attributes *Colour* and *Texture*. Although *Taste* and *Texture* are
335 more important than other sensory attributes when consumers choose beer, as reported
336 in former literatures (Makindara et al., 2013; McCluskey et al., 2011; Mejlholm &
337 Martens, 2006; Wright et al., 2008), our findings show that also *Colour* ranks amongst
338 the most important sensory attribute for Chinese consumer to purchase imported
339 European beer, as it has significant associations with consumption in all models. Due
340 to the tiny market share of imported beer (less than 0.3% in 2013), most of the Chinese
341 consumers mainly consume the domestic pale lagers with homogeneous colour (Bai et
342 al., 2011; Chen, 2015; Lu, 2014; Vernon, 2013). This may result in the attraction of more
343 ‘colourful’ or more diverse European beers to Chinese consumers.

344 European beer consumption is positively associated with *Brand* in the non-
345 Germany group. This is in line with the fact that *Brand* awareness, loyalty and
346 preferences are important for consumers to purchase beer and other alcohol beverages
347 (Atkin & Block, 1984 Empen & Hamilton, 2013; Yang et al., 2012). Furthermore, it is
348 negatively associated with *Alcoholic content* in the non-Germany group. As such,

349 *Alcoholic content* is considered as a barrier for Chinese consumers to purchase imported
350 European beer. This might be caused by the fact that Chinese consumers are not yet
351 adapted to European beer, a novel product with typically higher alcoholic content than
352 Chinese domestic pale lager (Bai et al., 2011; Vernon, 2013).

353 Results of the total sample model (Table 4) showed that male gender, living in
354 Shanghai city, having a good financial situation and a higher-level position, and being
355 a more frequent beer drinker in general have a significantly positive association with
356 European beer consumption in China. This is in line with the characteristics of beer
357 consumers in China and other countries, namely higher-income males (Colen &
358 Swinnen, 2015; Gabrielyan et al., 2014; Millwood et al., 2013). Furthermore, it fits with
359 the positioning of the imported beer aimed at the high-end market (e.g. targeting high-
360 income people such as managing employees) in China (Bei, 2013; Lu, 2014).
361 Moreover, the findings also correspond with the characteristics of typical European or
362 western food consumers in China: high income and living in a big and developed city
363 (e.g. Shanghai) (Curtis et al., 2007; Zhang, Dagevos, Van der Lans, & Zhai, 2008;
364 Wang, De Steur, et al., 2015; Wang, Gellynck, et al., 2015). This is also in line with the
365 profile of China's middle-class consumers (Barton, Chen, & Amy, 2013). China is
366 currently the world's largest country by the number of middle-class consumers,
367 estimated at 109 million people in 2015 (Kersley & Stierli, 2015). With the rise of the
368 Chinese middle-class, European high-valued food/beverage products gain popularity in
369 China (Diana, 2015; Olivier, 2015). Thus, European food marketers may meet the huge
370 demand for European high-valued food/beverage products by Chinese middle-class
371 consumers, and try to make their products successful in this unique 'Gold Mine'. In
372 addition, despite the big difference between Chinese domestic beer and European beer
373 (lager and non-lager) (Bai et al., 2011; Chen, 2015; Lu, 2014; Vernon, 2013), Chinese

374 frequent beer drinkers are still more likely to become the primary consumer group for
375 imported European beer. Therefore, marketing promotions for European beers should
376 be first targeted to the frequent beer drinkers in China, e.g. those people who often visit
377 bars, pubs, restaurants or other places involving beer consumption.

378 According to the country association for European beer, 64.7% of the Chinese
379 participants linked it to Germany. This is in line with the dominant share of China's
380 imports of German beer in recent years (59.1% in 2013) (Chen, 2015; China In Out,
381 2015; Lu, 2014). Our findings reflect the successful 'Country-of-Origin' promotions of
382 German beer in China, where for example the Munich Oktoberfest is very famous in
383 China and represents German (or even European) beer culture in Chinese consumers'
384 minds (Yang, Reeh, & Kreisel, 2011). This corresponds with the proposition that
385 'Country of Origin'-image is a complicated concept in international markets and needs
386 to be built in consumers' minds through the familiarity of the foreign product and
387 culture (Jiménez, & San Martín, 2010; Knight, & Calantone, 2000). German beer has
388 spent more than hundred years of effort to reach success since the Tsingtao Brewery
389 (one of largest and most reputable domestic brewers in China) was founded by German
390 settlers in 1903 (Mao, 2013).

391 Nevertheless, our study does have some important limitations. First of all, as we
392 focused on imported European beer as a general product category, we did not look at
393 specific European beer (lager and non-lager) varieties. Secondly, this study focused on
394 the associations of beer product attribute importance, social demographic factors, beer
395 consumption frequency and country association with the consumption of imported
396 European beer in China. Owing to the nature of the research methods used, the reported
397 associations do not imply causality. Our study did also not evaluate Chinese consumers'
398 beliefs or perceptions towards European beer. Future studies that explore Chinese

399 consumers' beliefs or perceptions towards European beer, that study the factors
400 influencing their attitudes and consumption, and that identify and profile market
401 segments are recommended. Thirdly, single items were used to assess European beer
402 consumption and product attribute importance for beer. Future relevant studies should
403 explore the factors by using multiple items to increase the measurement reliability.
404 Finally, given the online nature of the survey, our sample was biased towards highly
405 educated people.

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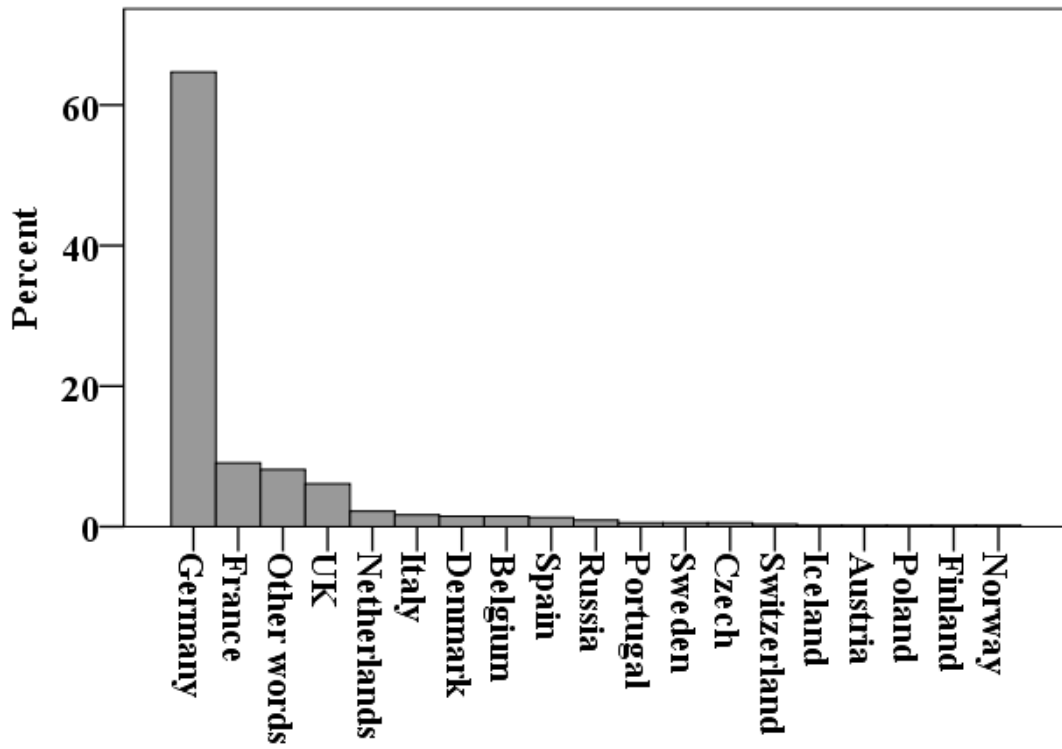


Figure 1
 Frequency of countries associated with 'European beer' by Chinese consumers (Percentage, n=541).

Table 1
Detailed socio-demographic characteristics of the total sample

	Socio-demographic characteristic	Total sample
Sample size (n)		541
Gender (%)		
	Male	42.7
	Female	57.3
City (%)		
	Shanghai	47.8
	Xi'an	52.2
Age		
	Mean	35.63
	Range (years)	19- 68
	19- 30 (%)	32.2
	31-40 (%)	31.2
	> 40 (%)	36.6
Financial situation (%)		
	Difficult- Moderate	10.4
	Moderate	24
	Moderate-Well off	65.6
Occupation (%)		
	Managing employee	31.8
	Salaried employee	34.6
	Student	17.7
	Worker (skilled and unskilled)	6.5
	Others (Self-employed, unemployed, retired, housewife/man and others)	9.4
Education (%)		
	Junior college and below	19.4
	Bachelor degree	61.6
	Master degree and above	19

Table 2

Variable description for ordered logistic regression analyses, frequency and mean (SD)

Variable	Type	Description	Frequency (%)
Dependent variables			
European beer consumption	Ordinal (1-4)	Never (=1)	25.3
		Stopped (=2)	39.4
		Sometimes (=3)	26.6
		Often (=4)	8.7
Explanatory variables			
Beer consumption frequency (in the past 14 days)	Ordinal (1-6)	0 day (=1)	33.3
		1 day (=2)	15.0
		2 days (=3)	14.0
		3 days (=4)	12.6
		4 to 6 days (=5)	12.9
		7 to 14 days (=6)	12.2
Financial situation	Ordinal (1-5)	Difficult- Moderate (=1)	10.4
		Moderate (=2)	24.0
		Slightly good (=3)	32.7
		Moderately good (=4)	24.8
		Well off (=5)	8.1
Gender (male)	Binary (0,1)	Female (=0), Male (=1)	
City (Shanghai)	Binary (0,1)	Xi'an (=0), Shanghai (=1)	
Country association (Germany)	Binary (0,1)	Non-Germany (=0), Germany (=1)	
Education level	Ordinal (1-3)	Junior college and below (=1), Bachelor degree (=2), Master degree and above (=3)	
Occupation	Category (0-4)	Managing employee (=4), Salaried employee (=3), Student (=2), Worker (=1), Others (=0)	
		Mean	SD
Age	Scale (19-68 years)	35.63	9.13
Texture		5.96	0.98
Taste		5.93	0.96
Availability		5.67	0.92
Brand		5.64	0.98
Varied assortment		5.63	1.08
Hangover effect	Scale (1-7)	5.59	1.22
Smell		5.43	1.04
Origin		5.27	1.12
Alcoholic content		5.21	1.20
Price		4.82	1.32
Appearance		4.81	1.20
Calorie content		4.66	1.29
Colour		4.61	1.31

Note: Please see Table 1 and 4 for the frequencies of gender, city, occupation, educational level and country association groups.

Table 3

Socio-demographic characteristics of country association groups

	Country association group (%)		χ^2	<i>p</i>
	Germany (n=350)	Non-Germany (n=191)		
City			2.31	0.13
Shanghai	50.3	43.5		
Xi'an	49.7	56.5		
Gender			11.39	0.001
Male	48	33		
Female	52	67		
Age (years)			0.84	0.66
19-30	31.4	33.5		
31-40	30.6	32.5		
> 40	38	34		
Financial Situation			0.16	0.92
Difficult- Moderate	10.3	10.5		
Moderate	24.6	23		
Moderate-Well off	65.1	66.5		
Education			4.69	0.095
Junior college and below	19.1	19.9		
Bachelor degree	59.1	66		
Master degree and above	21.7	14.1		
Occupation			10.86	0.03
Managing employee	34.9	26.2		
Salaried employee	33.4	36.6		
Worker (skilled and unskilled)	4.3	10.5		
Student	18.3	16.8		
Other (Self-employed, unemployed, retired, housewife/man and others)	9.1	9.9		

Table 4

Determinants of consumption for European beer in the total sample (ordered logistic regression model 1): odds ratios (OR), 95% confidence intervals (CI) and Wald Chi² statistics (Wald)

Explanatory variables	European beer consumption (Model 1)	
	Odds ratio / Wald (CI)	
Price	0.694***	22.93*** (0.59-0.81)
Taste	1.029	0.05 (0.80-1.32)
Brand	1.078	0.44 (0.86-1.35)
Appearance	0.923	0.84 (0.78-1.09)
Hangover effect	0.975	0.08 (0.83-1.15)
Availability	0.918	0.56 (0.74-1.15)
Alcoholic content	0.975	0.09 (0.83-1.15)
Colour	1.20*	4.42* (1.01-1.43)
Smell	0.95	0.18 (0.74-1.21)
Origin	1.620***	21.89*** (1.32-1.98)
Calorie content	0.93	0.68 (0.79-1.10)
Texture	1.16	1.34 (0.90-1.50)
Varied assortment	1.01	0.01 (0.82-1.25)
Age	1.01	0.44 (0.99-1.03)
Gender (male)	1.57*	5.82* (1.09-2.26)
City (Shanghai)	1.98***	14.52*** (1.39-2.82)
Educational level	1.28	2.95 (0.97-1.69)
Financial situation	1.73***	37.00*** (1.45-2.06)
Beer consumption frequency	1.75***	96.41*** (1.57-1.96)
Country association (Germany)	1.94**	11.92*** (1.33-2.82)
Model fit		
Chi ²	326.98	
Prob > Chi ²	0.000	
McFadden's Pseudo R ²	0.24	

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 5

European beer consumption of gender, city and country association groups.

Consumption of European beer	Consumption (%)				χ^2	<i>p</i>
	4	3	2	1		
City					25.16	<0.001
Shanghai (n=259)	10.0	32.0	42.1	15.8		
Xi'an (n=282)	7.4	21.6	36.9	34.0		
Gender					13.56	0.004
Male (n=231)	12.6	30.7	35.1	21.6		
Female (n=310)	5.8	23.5	42.6	28.1		
Country association					8.79	0.032
Germany (n=350)	9.7	30.0	37.4	22.9		
Non-Germany (n=191)	6.8	20.4	42.9	29.8		

Note: 1= Never consumed, 2= Stopped consuming, 3= Consume sometimes (less than once a month), 4= Consume often (more than once a month).

Table 6

Significant product attributes for European beer consumption in sub-samples of gender, city and country association groups (ordered logistic regression models 2 to 7): odds ratios (OR), 95% confidence intervals (CI) and Wald Chi² statistics (Wald)

Independent variables	European beer consumption					
	Model 2 (Shanghai, n=259)	Model 3 (Xi'an, n=282)	Model 4 (Male, n=231)	Model 5 (Female, n=310)	Model 6 (Germany, n=350)	Model 7 (Non-Germany, n=191)
	OR/Wald (CI)					
Price	0.62***/18.00*** (0.50-0.78)	0.71*** /12.75*** (0.59-0.86)	0.56***/24.17*** (0.44-0.70)	0.74**/10.60** (0.61-0.89)	0.71***/15.46*** (0.59-0.84)	0.64**/11.51*** (0.49-0.83)
Colour	1.51**/10.40** (1.18-1.95)	ns	1.33*/4.14* (1.01-1.75)	1.24*/4.01* (1.00-1.53)	1.40**/9.57** (1.13-1.74)	ns
Origin	1.36*/4.68* (1.03-1.80)	2.04***/26.66*** (1.56-2.67)	1.88***/12.61*** (1.33-2.67)	1.50**/11.29*** (1.18-1.90)	1.519**/9.86** (1.17-1.97)	2.15***/20.85*** (1.55-2.98)
Texture	ns	1.61**/7.02** (1.13-2.28)	ns	ns	ns	1.75 */5.47* (1.09-2.79)
Brand	ns	ns	ns	ns	ns	1.61 */5.71* (1.09-2.37)
Alcoholic content	ns	ns	ns	ns	ns	0.71 */4.71* (0.52-0.97)
	Model fit					
Chi ²	50.40	85.07	77.67	52.32	73.45	60.40
Prob > Chi ²	0.000	0.000	0.000	0.000	0.000	0.000
McFadden's Pseudo R ²	0.08	0.12	0.13	0.07	0.08	0.13

Note: Shown by the product attributes with significant effects on European beer consumption in the models; *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ns: no significant.