

**Motives for consumer choice of traditional food and European food
in mainland China**

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- Presents a Food Choice Questionnaire-based study in mainland China
- Proposes a novel construct with six food choice motive dimensions
- “Time or money saving” and “Sensory appeal” are key food choice motives
- Traditional food choices are driven by “Availability and familiarity”
- Preference for European food is linked to “Mood” motives

1 **Motives for consumer choice of traditional food and European food**
2 **in mainland China**

3
4 **Abstract**

5 The demand for European (-style) foods in mainland China has been
6 increasing dramatically during the last decade. Nevertheless, European food producers
7 often appear to be not capable to fully exploit this huge market potential, partially due
8 to the competition with traditional (Chinese) foods. This study examines the
9 determinants of mainland Chinese consumers' choice of traditional food and
10 European food. A web-based survey was administered with 541 consumers from two
11 cities: Shanghai and Xi'an. Thereby, the Food Choice Motives model, predominantly
12 used thus far in a European or developed context, is applied to mainland China in
13 order to address the lack of knowledge on food motives of its consumer market and to
14 detect associations between these motives, attitudes, and purchase intentions.

15 Factor analysis resulted in a new Food Choice Motive construct that is
16 considered more appropriate within the context of mainland Chinese consumers,
17 encompassing six dimensions: *Health concern*, *Time or money saving*, *Sensory appeal*,
18 *Availability and familiarity*, *Mood* and *Food safety concern*. Path analysis
19 demonstrated that *Time or money saving* was negatively associated with attitude
20 toward traditional food on the one hand and purchase intentions toward European
21 food on the other hand. *Availability and familiarity* had a positive association with
22 attitude toward traditional food. *Mood* was a positive factor driving attitude toward

23 European food. For both food types, *Sensory appeal* and *Attitude* were positively
24 linked to purchase intentions. Furthermore, *Mood* was negatively linked to the
25 purchase intention toward traditional food in Shanghai. *Food safety concern* was
26 positively associated with attitudes toward traditional food in Xi'an.

27 This study contributes to a better understanding of mainland Chinese
28 consumers as well as the key factors that play a role in their choices for traditional
29 (Chinese) food and European food. As such, these findings could support European
30 food producers when developing marketing strategies for more effectively reaching
31 Chinese consumers.

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33 **Keywords**

34 China, Consumer, Traditional food, European food, Food choice motives, Path
35 analysis

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49 **1. Introduction**

50 Due to the growing income levels, its huge consumer market, the changing
51 dietary habits and the Westernization of food consumption patterns in particular, and
52 since its accession to the World Trade Organization in 2003 (WTO), mainland China
53 became more and more important as a (potential) market for food producers around
54 the world, especially from European countries (Curtis, Mccluskey, & Wahl, 2007; Hu,
55 Cox, & Edwards, 2007; Pingali, 2007; World Bank, 2014). This is particularly the
56 case in the past years, as the annual growth rate of 27.3% for imported, processed
57 foods/beverages between 2008 and 2012 in mainland China shows (Alice, 2013). As a
58 consequence, China quickly became the largest wine export market of the European
59 Union (EU), for example (Alinna, 2013). And the Chinese food market is likely to
60 become even more oriented toward European foods in the future.

61 Opposite to this trend, European food producers face strong competition from
62 food producers in mainland China. Given the thousands of local traditional foods that
63 still determine the modern Chinese diet (Cai & Situ, 2006; Cheng, 1994; Zhang,
64 Zhang, Tang, Zou, & Su, 2009; Zhao, 2003), and the cultural dietary differences
65 between Chinese and Western consumer behavior (Chang, Kivela, & Mak, 2010; Sun
66 & Collins, 2004; Wan, 1995; Zhang et al., 2011), European and Western producers of
67 traditional foods are continuously seeking potential ways to successfully penetrate this
68 promising market. Nevertheless, there is still a lack of understanding of mainland
69 Chinese consumers' motives for their own traditional foods versus European foods.

70 When analyzing food choice motives, the work of Steptoe, Pollard, and

71 Wardle (1995) is indispensable. In their Food Choice Questionnaire (FCQ), they
72 classified food choice motives (FCMs) into nine dimensions: *Health, Mood,*
73 *Convenience, Sensory appeal, Natural content, Price, Weight control, Familiarity and*
74 *Ethical concern*. This FCQ was widely used by researchers to explore choice motives
75 of consumers with different cultural backgrounds for different food products (Chen,
76 2011; Honkanen, 2010; Honkanen & Frewer, 2009; Johansen, Næs, & Hersleth, 2011;
77 Pieniak, Verbeke, Vanhonacker, Guerrero, & Hersleth, 2009; Pohjanheimo,
78 Paasovaara, Luomala, & Sandell, 2010; Pula, Parks, & Ross, 2014; Sproesser,
79 Strohbach, Schupp, & Renner, 2011; Vyth et al., 2010; Zakowska-Biemans, 2011).
80 Several studies focused on traditional food products, mostly in Europe (Almli,
81 Verbeke, Vanhonacker, Næs, & Hersleth, 2011; Guerrero et al., 2010; Guerrero et al.,
82 2012; Guerrero et al., 2009; Pieniak et al., 2009; Vanhonacker, Lengard, Hersleth, &
83 Verbeke, 2010; Vanhonacker, Verbeke, et al., 2010). The study by Almli et al. (2011)
84 showed that product attributes related to *sensory, health* and *quality* issues helped
85 European consumers to create a positive image of traditional foods, whereas product
86 attributes like *convenience* or *price*, had a negative effect on their perception. Pieniak
87 et al. (2009) reported that the most important motives for European consumers to
88 choose traditional foods were: *Weight control, Convenience, Familiarity, Healthiness*
89 and *Natural content*. However, until now, few empirical studies have examined
90 Chinese consumers' choice motives for European foods. Whereas Curtis et al. (2007)
91 found that 'taste' has a large impact on Chinese consumers' preferences for Western-
92 style convenience foods, Li, Lai, Harrill, Kline, and Wang (2011) mentioned that

93 Chinese outbound travelers were very sensitive to the *cleanliness / safety* and *price* of
94 local foods when visiting Western countries. Chinese tourists mainly looked at
95 *appetizing assurance* and *familiar flavor* when choosing Australian local food (Chang
96 et al., 2010). Notwithstanding the usefulness of their findings, none of these studies
97 used a model like a FCQ-based model, to comprehensively analyze and understand
98 mainland Chinese consumers' FCMs as well as their choice motives for traditional
99 Chinese food and European food.

100 Given the aforementioned research gaps, the aim of this study is to examine
101 the association between FCMs and mainland Chinese consumers' attitudes and
102 purchase intentions toward their own traditional food and European food. This allows
103 for comparison of consumer behavior for two distinct types of food, local, traditional
104 food versus European foods in mainland China. Thereby, 'European food' was
105 defined as 'local food products imported from Europe or food with a European style
106 or flavor that can be consumed in restaurants or other places in China'. Building upon
107 the FCQ and theoretical models on food choice motives and consumer behavior
108 (attitudes, purchase intentions, consumption) (Ajzen, 1991; Chen, 2007; Pieniak et al.,
109 2009; Zakowska-Biemans, 2011; Žeželj, Milošević, Stojanović, & Ognjanov, 2012), a
110 hypothetical model was developed, as shown in Figure 1. FCMs are assumed to have
111 a direct impact on consumer attitudes and purchase intentions (willingness to buy) of
112 both food types. Meanwhile, FCMs are also expected to indirectly influence the
113 purchase intentions through attitude. As previous FCQ-based studies have shown that
114 the applicability of FCM constructs differs according to the cultural setting

115 (Honkanen, 2010; Honkanen & Frewer, 2009; Milošević, Žeželj, Gorton, & Barjolle,
116 2012; Pula et al., 2014; Zakowska-Biemans, 2011; Žeželj et al., 2012), we assessed
117 the generalizability of the original construct of FCMs (Steptoe et al., 1995) to a
118 consumer sample obtained from mainland China.

119

120 >> Insert Figure 1

121

122 **2. Materials and methods**

123 ***2.1. Participants and procedures***

124 The data collection was conducted by a Chinese market research agency in
125 December 2013. A web-based questionnaire was sent to registered members of a
126 consumer panel maintained by the research agency, using strict identification
127 verification. The study was done in two mainland Chinese cities: Shanghai and Xi'an.
128 All participants who completed the questionnaire received a monetary incentive.

129 This rationale behind the selection of both cities is related to their location:
130 Shanghai in Northern and Xi'an in Southern China. Besides obvious differences
131 between both regions in terms of cultural history, dietary habits and lifestyles, there
132 are also differences in consumption behavior between this low and high income
133 region (He, 2013; Sun & Collins, 2004; Sun, 2012).

134 Being an international metropolis and the most developed city of mainland
135 China, Shanghai has gained most exposure to Western (food) cultures in mainland
136 China, while Xi'an is a more traditional city in a less developed region with far lower

137 per capita income (Liu et al., 2011; National Bureau of Statistics of the People's
138 Republic of China, 2013).

139 A total of 541 valid responses were collected for this study, of which 259 from
140 Shanghai and 282 from Xi'an. Table 1 presents the detailed socio-demographic
141 characteristics of the pooled sample and the subsamples, including age, gender,
142 financial situation of the household and occupation. In line with previous research
143 (Pieniak et al., 2009), the financial situation of households was subjectively assessed
144 by participants on a 7-point interval scale ranging from 'difficult' to 'well off'.

145

146 >> Insert Table 1

147

148 **2.2. Pretest**

149 The questionnaire was initially developed in English and translated into
150 Chinese. Two rounds of online pretests were carried out with Chinese participants
151 living in China and working in Belgium. Apart from completing the questionnaire,
152 these participants were asked to provide feedback about the design and interpretation
153 of the questionnaire. Based on the results and feedback, the survey design and
154 Chinese translation were adapted.

155

156 **2.3. Measures**

157 The questionnaire consisted of three sections: (1) the food choice motives in
158 general; (2) the attitudes and purchase intentions (willingness to buy) related to
159 traditional food and European food; and (3) socio-demographic characteristics.

160 FCMs were based on the original FCQ (Steptoe et al., 1995), but not all
161 original FCM items were considered in this study. We have followed the selection
162 strategy of Pieniak et al. (2009), in which only the most appropriate and relevant FCM
163 dimensions and items are included based on a prior qualitative study. Prior to this
164 study, a word association test was conducted to explore Chinese consumer
165 perceptions of traditional food and European food in 2012 (Wang, Gellynck, Liu, Liu,
166 Zhang, Vanhonacker, & Verbeke, 2014). In line with Hawkins and Mothersbaugh
167 (2009), who pointed out that consumer perceptions of marketing stimuli of a product
168 are influenced by motives, items and dimensions were selected based on the
169 frequencies of the terms that participants associated with the stimulus words
170 ‘traditional food’ and ‘European food’. For example, because none of the participants
171 related both stimulus words with ethical concern, political issues and environmental
172 protection issues, the overall FCM dimension of *Ethical concern* and its underlying
173 items were excluded in the present study. As a consequence, eight FCM dimensions
174 from the original FCQ were included to examine participants’ motives for food
175 choices: *Sensory appeal*, *Convenience*, *Mood*, *Weight control*, *Natural content*, *Price*,
176 *Health* and *Familiarity*. This results in a total of twenty-seven original FCM items
177 (Table 2). Participants were asked to evaluate the importance of these items for their
178 daily food choice (*‘It is important to me that the food I eat on a typical day*
179 *is/contains...’*), on a seven-point Likert scale: 1= disagree strongly, 2= disagree
180 moderately, 3= disagree slightly, 4= neither agree nor disagree, 5= agree slightly, 6=

181 agree moderately, and 7= agree strongly (Prescott, Young, O'Neill, Yau, & Stevens,
182 2002).

183

184 >> Insert Table 2

185

186 Participants' attitudes toward traditional food and European food were
187 assessed by respectively three seven-point semantic differential scales using bipolar
188 adjectives: unhappy/happy, dull/excited, and terrible/delighted (Table 3). This method
189 had been employed in previous FCQ-based studies assessing consumers' general
190 attitudes toward food products (Pieniak et al., 2009; Žeželj et al., 2012).

191 Items measuring purchase intentions (willingness to buy) were derived from a
192 study by Klein, Ettenson, and Morris (1998), which examined mainland Chinese
193 consumers' purchase intentions (willingness to buy) toward Japanese products.
194 Participants were asked to indicate their agreement with the statements: (1) '*I would*
195 *never buy a [food category] (R).*' (2) '*Whenever available, I would prefer to buy*
196 *[food category].*' and (3) '*Whenever possible, I would avoid buying [food category]*
197 *(R).*' (Table 3). Each of these three statements were asked for traditional food and
198 European food, and assessed on a seven-point interval scale with the same response
199 categories as in the evaluation part of the FCMs. The two reverse-scored items were
200 recoded before data analysis.

201

202 >> Insert Table 3

203

204 **3. Data analysis and results**

205 **3.1. Analysis methods**

206 The statistical software tools SPSS 22 and AMOS 21 were used for
207 performing all analyses in this research. With respect to the generalizability of the
208 original construct of FCMs (i.e. the eight dimensions, as shown in Table 2) for the
209 specific case of our mainland Chinese sample, the analysis methods were similar as in
210 the FCQ-based studies presented by Eertmans, Victoir, Notelaers, Vansant, & Van
211 den Bergh (2006) and Milošević et al. (2012). First, confirmatory factor analysis
212 (CFA) was used to examine whether the original FCM construct has a good fit with
213 the pooled sample and the samples of the two cities (AMOS 21); second, as the
214 construct did not fit well with the samples, exploratory factor analysis was conducted
215 to explore the appropriateness of the construct of FCMs for the specific Chinese
216 sample. Principal component analysis (PCA) with varimax rotation was used (SPSS
217 22).

218 Structural equation modeling (SEM) was used to assess the association
219 between the FCM variables of the new FCM construct and the attitude and purchase
220 intention variables related to traditional food and European food, based on two
221 previous FCQ-based studies (Pieniak et al., 2009; Žeželj et al., 2012). Path analysis
222 for the pooled sample and multi-group path analysis for the two city subsamples were
223 conducted to detect significant relationships among the latent variables of FCM

224 dimensions, attitudes and purchase intentions as well as to identify if the data of the
225 two cities were suitable to analyze them together (AMOS 21) (Wu, 2009).

226 As Rigdon (1995) indicated that Chi-square may not be an appropriate
227 measure of goodness-of-fit for a SEM, due to the complicated structure, large amount
228 of variables or the use of data from the real world, and because Wu (2009) pointed out
229 that Chi-square is not suitable to evaluate the goodness-of-fit of a SEM collecting data
230 from questionnaire survey with a sample size above 200, we evaluated the goodness-
231 of-fit by four other indices, considering the complexity of the SEM and the sample
232 size in current study: (1) Root Mean Square Error of Approximation (RMSEA), the
233 value of acceptable fit is below 0.08; (2) Comparative Fit Index (CFI), the value of
234 acceptable fit is above 0.9 (with 'above 0.95' as ideal); (3) Incremental Fit Index
235 (IFI), the value of acceptable fit is above 0.9; (4) Normed chi-square (NC = Chi-
236 square / Degrees of freedom), the recommended value is between 1 and 3 (Hu &
237 Bentler, 1999; McDonald & Ho, 2002; Pula et al., 2014; Wu, 2009).

238

239 ***3.2. Confirmatory factor analysis***

240 The 27 FCM items belong to eight dimensions of the original FCQ construct
241 (Steptoe et al., 1995). In this study, CFA was used for the pooled sample and the
242 samples of two cities to determine if the original FCM construct is appropriate for our
243 mainland Chinese sample. As shown in Table 4, the goodness of fit is poor for either
244 the pooled sample or the samples of two cities. The values of all indices were outside
245 of what is acceptable. Values of RMSEA were above 0.08, CFI and IFI values were

246 below 0.9, and NC values were above 3. Therefore, the original FCM construct is not
247 suitable for our specific sample.

248

249 >> Insert Table 4

250

251 Besides, in a CFA, factor loadings (standardized regression weights of items)
252 should be between 0.5 and 0.95 for items to actually reflect the theoretical latent
253 construct they are designed to evaluate (Hair, Black, Babin, & Anderson, 2014; Wu,
254 2009). In our case, the item '*Is good value for money*' had very low factor loadings in
255 either the pooled sample or samples of the two cities (pooled sample 0.362, Shanghai
256 sample 0.387, Xi'an sample 0.335). The factor loadings of the other 26 items varied
257 between 0.502 and 0.845 for the pooled sample, between 0.443 and 0.841 for the
258 Shanghai sample and between 0.503 and 0.843 for the Xi'an sample. The low factor
259 loading of '*Is good value for money*' FCM in the dimension *Price* is in line with
260 previous FCQ-based studies (Honkanen & Frewer, 2009; Januszewska, Pieniak, &
261 Verbeke, 2011; Milošević et al., 2012; Pieniak et al., 2009; Pohjanheimo et al., 2010;
262 Roos, Lehto, & Ray, 2012). It seems that this item should not be considered as an
263 appropriate survey question for examining the FCM dimension *Price*. Therefore,
264 *Price* and *Value for money* were treated as two separate food choice motive
265 dimensions in the study by Brunner, van der Horst, and Siegrist (2010). Kornelis, Van
266 Herpen, Van der Lans, and Aramyan (2010) also pointed out that the item '*Is good*
267 *value for money*' did not contribute to the measurement of the price dimension,

268 because of its focus on the price-quality assessment, as compared to the price
269 assessment of two other items. As a consequence, we did not include this item in our
270 statistical analyses.

271

272 **3.3. Principal component analysis (PCA)**

273 A PCA with varimax rotation was conducted to explore the construct of 26
274 FCM items for the pooled sample. A new construct with six dimensions was
275 identified. The item '*Is like the food I ate when I was a child*' did not load well on any
276 dimension (with factor loadings below 0.50). This item may be more suitable for
277 examining the concept 'Symbolic value of a food to people', an extra value of some
278 special food products, such as traditional food or ethnic food (Lupton, 1994;
279 Vanhonacker, Lengard, et al., 2010; Verbeke & Lopez, 2005; Zhou & Hui, 2003).
280 None of the other 25 items were related to the *Symbolic value* dimension. Therefore,
281 the item '*Is like the food I ate when I was a child*' was deleted from the new FCM
282 construct and was not incorporated in the analyses.

283 The six new FCM dimensions consist of 25 items as shown in Table 5.
284 Reliabilities of these six dimensions are relatively high given that they all have a
285 Cronbach's α score above 0.60 (Žeželj et al., 2012).

286

287 >> Insert Table 5

288

289 There are similarities and differences between the new and original FCM

290 constructs. First, the dimensions *Sensory appeal* and *Mood* of the new construct
291 contain the same items as in the original FCM construct.

292 Second, the new dimension *Health concern* included all items of the original
293 FCM dimensions *Health* and *Weight control*, and one item from the original
294 dimension *Natural content*, namely ‘*Contains natural ingredients*’. It seems that there
295 is no clear distinction between the concepts of *Health* and *Weight control* in mainland
296 Chinese consumers’ minds.

297 Third, the other two items of the original dimension *Natural content*, namely
298 ‘*Contains no artificial ingredients*’ and ‘*Contains no additives*’, loaded on a new
299 dimension. These two items are semantically similar and deal with the topic of
300 artificial ingredients in food products. In recent years, a huge number of food safety
301 events suddenly emerged in mainland China, leading to increased concerns of
302 consumers with regard to food safety (Ortega, Wang, Wu, & Olynk, 2011; Qiao, Guo,
303 & Klein, 2012; Liu, Pianiak, & Verbeke, 2013; 2014). Furthermore, some of these
304 food safety events were specifically related to the problems of artificial ingredients or
305 additives in food products (Tang, 2013; Zhang, An, & Zhang, 2013). To this end, we
306 defined this new dimension as *Food safety concern*.

307 Fourth, similar with some previous FCQ-based studies, the five items of the
308 original FCM dimension *Convenience* loaded on different dimensions in the new
309 FCM construct (Honkanen & Frewer, 2009; Milošević et al., 2012). Among them,
310 three items with a semantic meaning about preparing food in a simply way, loaded on
311 a new dimension with two items of another original FCM dimension *Price*. We

312 named this new dimension *Time or money saving*. This dimension reflects a food
313 choice motive about purchasing simple and everyday food to gain time and reduce
314 costs.

315 Finally, the two other items of the original FCM dimension *Convenience*,
316 dealing with the availability to purchase food, loaded on another new dimension with
317 two items from the original FCM dimension *Familiarity*. This new dimension is
318 defined as *Availability and familiarity*, and represents a Chinese consumer food
319 choice motive about buying daily foods which are familiar or available in familiar
320 markets.

321

322 **3.4. Path analysis**

323 A structural equation model (SEM) was built to assess the association between
324 the FCMs and the attitudes and purchase intentions toward traditional food and
325 European food (see Figure 2). The model included ten latent variables, the six new
326 FCM dimensions and the attitudes and purchase intentions toward the two types of
327 foods. These latent variables encompass 37 observed variables. The observed
328 variables of the four latent variables about attitudes and purchase intentions have good
329 internal reliabilities, with high Cronbach α scores: 0.859 for the *attitudes toward*
330 *traditional food*, 0.675 for the *purchase intentions (willingness to buy) toward*
331 *traditional food*, 0.928 for the *attitudes toward European food* and 0.796 for the
332 *purchase intentions (willingness to buy) toward European food* (Žeželj et al., 2012).

333

334 >> Insert Figure 2

335

336 Path analysis was conducted for the pooled sample. The SEM was modified
337 through correlating the error variables between two FCM items '*Is cheap*' and '*Is not*
338 *expensive*' because these items refer to a similar issue and because the values of
339 modification indices were much higher than the values between other FCM items
340 (Anderson & Gerbing, 1988; Byrne, 2001; Wu, 2009). Regarding the goodness-of-fit
341 indices for the path analysis, the modification lead to a substantial decrease in Chi-
342 Square value, which further justifies the modification (Byrne, 2001; Wu, 2009). Table
343 6 shows the goodness-of-fit indices for this path analysis. The SEM performed well in
344 the path analysis, as the values of all indices were within the acceptance limits: below
345 0.08 for RMSEA, above 0.9 for CFI and IFI and below 3 for NC (Table 6).
346 Furthermore, multi-group path analysis was conducted for the samples of two cities
347 based on the SEM after modification. The RMSEA and NC values indicated an
348 acceptable fit for all restricted models (RMSEA, from 0.040 to 0.041; and NC, from
349 1.887 to 1.899); while only the CFI and IFI values were suboptimal (CFI, from 0.880
350 to 0.889; and IFI, from 0.880 to 0.891) (Žeželj et al., 2012). However, as Olsen,
351 Scholderer, Brunsø, and Verbeke (2007) suggested, the RMSEA values of restricted
352 models are a sufficient indicator for justifying the decision to pool the data. Moreover,
353 RMSEA values are also considered a better indicator than other indices for model-fit
354 evaluation (Marsh & Balla, 1994; Wu, 2009). This underpins our decision to pool our
355 data in order to detect significant paths between the FCM dimensions and the attitudes

356 and purchase intentions toward traditional food and European food.

357

358 >> Insert Table 6

359

360 Figure 3 shows the significant paths of the SEM, with standardized regression
361 weights, for the pooled sample and the samples of two cities. Generally speaking, for
362 either the pooled sample or the samples of two cities, consumers' attitudes were
363 positively and strongly associated with their purchase intention toward both
364 traditional food and European food. This means that the FCM factors, which directly
365 influence consumers' attitudes, would also indirectly influence their purchase
366 intentions toward both types of foods (Ajzen, 1991; Chen, 2007; Pieniak et al., 2009).

367 With regard to the pooled sample, consumers' attitude toward traditional food
368 was positively linked to the FCM dimension *Availability and familiarity*, and
369 negatively linked to *Time or money saving*. In other words, those mainland Chinese
370 consumers who attached more importance to daily food purchases in order to save
371 time or money had less positive attitudes toward traditional foods. By contrast, people
372 who preferred to buy familiar foods or foods in familiar market places had more
373 positive attitudes toward traditional food. Furthermore, consumers' attitude for
374 European food was positively associated with *Mood*. So, those mainland Chinese
375 consumers who often chose foods for relaxing or easing stress were more likely to
376 have a positive attitude toward European food. Moreover, the FCM dimension
377 *Sensory appeal* was recognized to have positively direct relationships with

378 consumers' purchase intentions toward both traditional food and European food. In
379 addition, *Time or money saving* had a negative direct relationship with the purchase
380 intention toward European food.

381 According to the samples of the two cities, *Sensory appeal* was found to have
382 strong, positive, and direct relationships with consumers' purchase intentions toward
383 European food in both cities and toward traditional food in Shanghai in particular.
384 Additionally, *Time or money saving* had negative direct relationships with consumers'
385 purchase intentions toward both traditional food and European food in Shanghai.
386 *Mood* was negatively linked to the purchase intention toward traditional food, while it
387 was positively associated with the attitudes toward European food in Shanghai. Like
388 the pooled sample, the FCM dimension *Availability and familiarity* was also
389 positively related to consumers' attitudes toward traditional food in Shanghai. Such
390 significant paths were not found in the Xi'an subsample. Furthermore, *Food safety*
391 *concern* had a positive association with consumers' attitudes toward traditional food
392 in Xi'an. Here, no significant path was found in the sample of Shanghai consumers.

393

394 >> Insert Figure 3

395

396 **4. Discussion**

397 To our knowledge, this is the first study that uses the FCQ and its FCM
398 dimensions to evaluate food choice motives with consumers from mainland China.
399 Moreover, it evaluates its applicability by targeting two distinct food types, Chinese

400 traditional versus European foods, and two different regions, Shanghai (Southern
401 China, with high degree of development) and Xi'an (Northern China, with a lower
402 degree of development and less developed). The original FCQ is considered a
403 comprehensive and reliable tool to explore consumers' daily food choice motives, but
404 was initially developed through research in a Western (European) setting (Fotopoulos,
405 Krystallis, Vassallo, and Pagiaslis & 2009; Steptoe et al., 1995). As such, previous
406 studies indicated that the FCM constructs of the original FCQ cannot be totally
407 replicated across different countries or regions (Eertmans et al., 2006; Fotopoulos et
408 al., 2009; Milošević et al., 2012; Pula et al., 2014). Indeed, the result of our
409 confirmatory analysis in this study confirmed that the original FCM construct
410 (dimension *Ethical concern* was not included) is not appropriate for analyzing FCM
411 in mainland China. By using exploratory factor analysis, a novel, more suitable FCM
412 construct was revealed for the mainland Chinese sample, characterized by six
413 dimensions: *Health concern*, *Time or money saving*, *Sensory appeal*, *Availability and*
414 *familiarity*, *Mood* and *Food safety concern*. Based on this new FCM construct, a
415 structural equation model for path analysis provided a good fit to identify associations
416 between mainland Chinese consumers' food choice motives and their attitudes and
417 purchase intentions toward traditional food and European food.

418 With respect to the motivation factors that drive mainland Chinese consumers
419 to choose traditional food, five factors had a direct or indirect effect, either in the
420 pooled sample or a city subsample: *Time or money saving* (negatively related to the
421 choice of traditional food), *Sensory appeal* (positively related), *Availability and*

422 *familiarity* (positively related), *Mood* (negatively related in Shanghai) and *Food safety*
423 *concern* (positively related in Xi'an). This is partially in line with previous consumer-
424 based studies related to traditional food in Europe, where *Sensory appeal* and *the*
425 *assurance of safety and quality* were key factors for European consumers, and
426 *inconvenience* and *high price* were key barriers (Almli et al., 2011; Pieniak et al.,
427 2009). It also corresponds with the positive association between traditional food
428 consumption in Europe and the original FCM dimensions *Familiarity* and *Natural*
429 *content*, although in our study two items of the dimension *Natural content* were
430 classified into a new FCM dimension *Food safety concern*, while a negative link was
431 found with the dimension *Convenience* (Pieniak et al., 2009). Not surprisingly,
432 traditional food consumers prefer to spend a relative high percentage of income and a
433 long time on (preparing) food, as compared to non-traditional food consumers (Almli
434 et al., 2011; Pieniak et al., 2009; Vanhonacker, Lengard, et al., 2010).

435 Some differences were found with respect to the choice motives for traditional
436 food between European consumers (Pieniak et al., 2009) and mainland Chinese
437 consumers. Whereas *Weight control* and *Healthiness* were two negative factors for
438 European consumers to choose traditional food (Pieniak et al., 2009), the dimension
439 *Health concern* was not found to have a significant relationship in our study. This
440 may be due to differences in dietary patterns, culture and customs between China and
441 Europe. A traditional Chinese dietary pattern, for instance, contains more vegetables,
442 less meat, less calories and less fat than that of Europeans (Behar, 1976; Wan, 1995).
443 This may have resulted in more traditional foods with less unhealthy ingredients in

444 mainland China. Furthermore, the dimension *Mood* was negatively linked to
445 consumers' purchase intentions toward traditional food in Shanghai, while this FCM
446 dimension was not included in previous FCQ surveys on European consumers'
447 traditional food choice motives (Pieniak et al., 2009). As *Mood* reflects consumers'
448 emotional feelings toward food products (Steptoe et al., 1995), this finding reveals
449 that traditional food was not chosen by consumers for emotional reasons, such as
450 stress relieve.

451 When looking at European food, three important motivation factors directly or
452 indirectly influenced mainland Chinese consumers' choice: *Mood* (positively related),
453 *Sensory appeal* (positively related) and *Time or money saving* (negatively related).
454 *Sensory appeal* was found to have a strong and direct influence on mainland Chinese
455 consumers' choice for European food. This confirms the importance of *appetizing or*
456 *taste reassurance* in China in order to try or consume Western-style foods, as reported
457 previously by other studies (Chang et al., 2010; Curtis et al., 2007). Further, *Mood*
458 was an important reason for choosing European food. This corresponds with previous
459 studies showing that Chinese consumers often consume Western-style foods for the
460 aesthetic and emotional pleasures as well as to experience Western cultures (Curtis et
461 al., 2007; Zhou & Hui, 2003). In addition, *Time or money saving* was considered as a
462 barrier (negatively related) for purchase intentions toward European food, which fits
463 with the current reality of Western-style foods in mainland Chinese markets. The
464 imported Western-style food products are often much more expensive than Chinese
465 local food products. For most of mainland Chinese consumers, such foods are not a

466 crucial component of their daily diet. In this study, the concept of European food was
467 defined as ‘a local food product imported from Europe or the food with European
468 style or flavor that can be consumed in restaurants or other places of China’, rather
469 than convenient or, even, fast foods. Participants may directly associate the concept of
470 European food with the high-priced imported foods or the foods in high-end Western
471 restaurants. Therefore, it is reasonable that Chinese consumers who attach importance
472 to saving money or time when buying food are less willing to choose European food.

473 There were also differences in consumer behavior toward traditional food and
474 European food between the two cities. *Mood* and *Time or money saving* appeared to
475 be significant for consumers to choose both food types in Shanghai, while these two
476 factors did not play a role in the Xi’an sample. This may be caused by the discrepancy
477 between the development levels of the two cities or regions. Hence, *getting relaxed* or
478 *saving time or money* from foods may become important for Shanghai people in order
479 to deal with the high-pressure style of daily life.

480 For either traditional or European foods, *Sensory appeal* was a direct and
481 strong factor driving mainland Chinese consumers’ purchase intention. Indeed,
482 sensory pleasure, such as tasty, nice smell and good appearance, is considered of great
483 importance for consumer food preferences in China (Dang, 2010; Wan, 1995). In this
484 respect, when Western food marketers aim to exploit the mainland Chinese consumer
485 market, they could employ sensory-related marketing strategies, for instance, by
486 adjusting the sensory attributes (e.g. taste and appearance) of their products in line
487 with specific (regional) food patterns and consumer requirements. Similarly as our

488 finding that one needs to adapt the FCM construct to the specific cultural setting, one
489 needs also to adapt its marketing strategy when aiming to enter a different food
490 market. By providing a better understanding of Chinese consumers' food choice
491 motives, this study has contributed to provide an answer to both issues.

492 Nevertheless, our study has some important limitations. First of all, given the
493 nature of our survey, i.e. an online questionnaire, and the relatively small number of
494 participants involved, our sample did not fully represent the demographic
495 characteristics of mainland China as well as the two particular cities. Additionally,
496 this study focused on FCQ-based items and dimensions. It is necessary for future
497 research to also focus or integrate factors outside the FCQ, such as *Origin of food*,
498 *Food neophobia* and *Symbolic values*. Furthermore, as we focused on traditional food
499 and European food as two general types of food, we did not analyze whether our
500 novel construct is valid for specific food categories. Moreover, due to the fact that our
501 FCM construct is based on PCA, our data should not be used for a CFA (Biddle &
502 Marlin, 1987; Breckler, 1990; Wu, 2009). A CFA might be conducted for the new
503 construct in future FCQ-based studies for mainland China. In addition, given the
504 scope of this study, our SEM model (Figure 2) was used for a path analysis to address
505 the lack of understanding of Chinese consumers' motives for traditional food and
506 European food, whereas developing a theoretical model for those food choices was
507 not part of this study.

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1 **Table 1. Detailed socio-demographic characteristics of the samples**

	Pooled sample	Shanghai	Xi'an
Sample size (n=)	541	259	282
Gender			
Male	42.7%	38.6%	46.5%
Female	57.3%	61.4%	53.5%
Age			
Mean	35.63	37.16	34.23
Range	19- 68	19- 59	19-68
19- 30	32.2%	24.3%	39.4%
31-40	31.2%	34.4%	28.3%
> 40	36.6%	41.3%	32.3%
Financial Situation			
Difficult-			
Moderate	10.4%	5.4%	14.9%
Moderate	24%	20.1%	27.7%
Moderate-Well			
off	65.6%	74.5%	57.4%
Occupation			
Managing			
employee	31.8%	36.7%	27.3%
Salaried			
employee	34.6%	44%	25.9%
Student	17.7%	5.4%	29.1%
Skilled worker	6.3%	7.3%	5.3%
Other	9.6%	6.6%	12.4%

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5 **Table 2. Selected FMC items and original dimensions**

6	Code	Item and dimension
7		Health
8	FCM1	Contains a lot of vitamins and minerals
9	FCM2	Keeps me healthy
10	FCM3	Is high in fiber or roughage
11		Weight control
12	FCM4	Is low in fat
13	FCM5	Helps me control my weight
14	FCM6	Is low in calories
		Convenience
15	FCM7	Can be bought in shops close to where I live or work
	FCM8	Is easily available in shops and supermarkets
16	FCM9	Takes no time to prepare
	FCM10	Is easy to prepare
17	FCM11	Can be cooked very simply
		Sensory appeal
18	FCM12	Smells nice
	FCM13	Tastes good
19	FCM14	Looks nice
	FCM15	Has a pleasant texture
20		Familiarity
	FCM16	Is familiar
21	FCM17	Is what I usually eat
	FCM18	Is like the food I ate when I was a child
22		Mood
	FCM19	Helps me cope with stress
23	FCM20	Cheers me up
	FCM21	Helps me relax
24		Natural content
	FCM22	Contains natural ingredients
25	FCM23	Contains no artificial ingredients
	FCM24	Contains no additives
26		Price
	FCM25	Is cheap
27	FCM26	Is not expensive
	FCM27	Is good value for money

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31 **Table 3. Measurement items for attitudes and purchase intentions toward**
 32 **traditional food and European food**

33 Code	Item and dimension
ATT	Attitudes toward traditional food
34 ATT1	unhappy/happy
ATT2	dull/excited
35 ATT3	terrible/delighted
ATE	Attitudes toward European food
36 ATE1	unhappy/happy
ATE2	dull/excited
37 ATE3	terrible/delighted
WTBT	Willingness to buy (purchase intentions) traditional food
38 WTBT1	I would never buy a traditional food (R).
WTBT2	Whenever available, I would prefer to buy traditional food.
39 WTBT3	Whenever possible, I avoid buying traditional food (R).
WTBE	Willingness to buy (purchase intentions) European food
40 WTBE1	I would never buy a European food (R).
WTBE2	Whenever available, I would prefer to buy European food.
41 WTBE3	Whenever possible, I avoid buying European food (R).

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46 **Table 4. Goodness-of-fit indices for confirmatory factor analysis**

	Pooled sample	Shanghai	Xi'an
Chi-square	1442.138	940.833	910.213
DF	296	296	296
NC	4.872	3.178	3.075
CFI	0.815	0.792	0.808
RMSEA	0.085	0.092	0.086
IFI	0.816	0.796	0.811

47 * $p < 0.001$ for the pooled sample and the samples of each city.

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77 **Table 5. Summary of the PCA, with rotated factor loadings (>0.50) of items and**
 78 **the Cronbach's α scores of dimensions**

Code	Item and dimension	Rotated factor loading	Cronbach's α
HC	Health concern		0.894
FCM1	Contains a lot of vitamins and minerals	0.756	
FCM4	Is low in fat	0.754	
FCM5	Helps me control my weight	0.747	
FCM3	Is high in fiber or roughage	0.746	
FCM6	Is low in calories	0.732	
FCM2	Keeps me healthy	0.701	
FCM22	Contains natural ingredients	0.667	
TMS	Time or money saving		0.775
FCM25	Is cheap	0.796	
FCM26	Is not expensive	0.739	
FCM9	Takes no time to prepare	0.657	
FCM10	Is easy to prepare	0.587	
FCM11	Can be cooked very simply	0.555	
SA	Sensory appeal		0.739
FCM12	Smells nice	0.722	
FCM13	Tastes good	0.713	
FCM14	Looks nice	0.659	
FCM15	Has a pleasant texture	0.637	
AF	Availability and familiarity		0.678
FCM16	Is familiar	0.677	
FCM7	Can be bought in shops close to where I live or work	0.601	
FCM17	Is what I usually eat	0.574	
FCM8	Is easily available in shops and supermarkets	0.550	
M	Mood		0.743
FCM19	Helps me cope with stress	0.746	
FCM20	Cheers me up	0.739	
FCM21	Helps me relax	0.731	
FSC	Food safety concern		0.826
FCM23	Contains no artificial ingredients	0.783	
FCM24	Contains no additives	0.661	

79 * FCM1-FCM25: the codes of FCM items (see Table 2); HC, M, TMS, SA, AF and
 80 FSC: the codes of six FCM dimensions.

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84 **Table 6. Path analysis goodness-of-fit indices (pooled sample, n=541)**

	Pooled sample
Chi-square	1515.278
DF	587
NC	2.581
CFI	0.901
RMSEA	0.054
IFI	0.902

85 * $p < 0.001$

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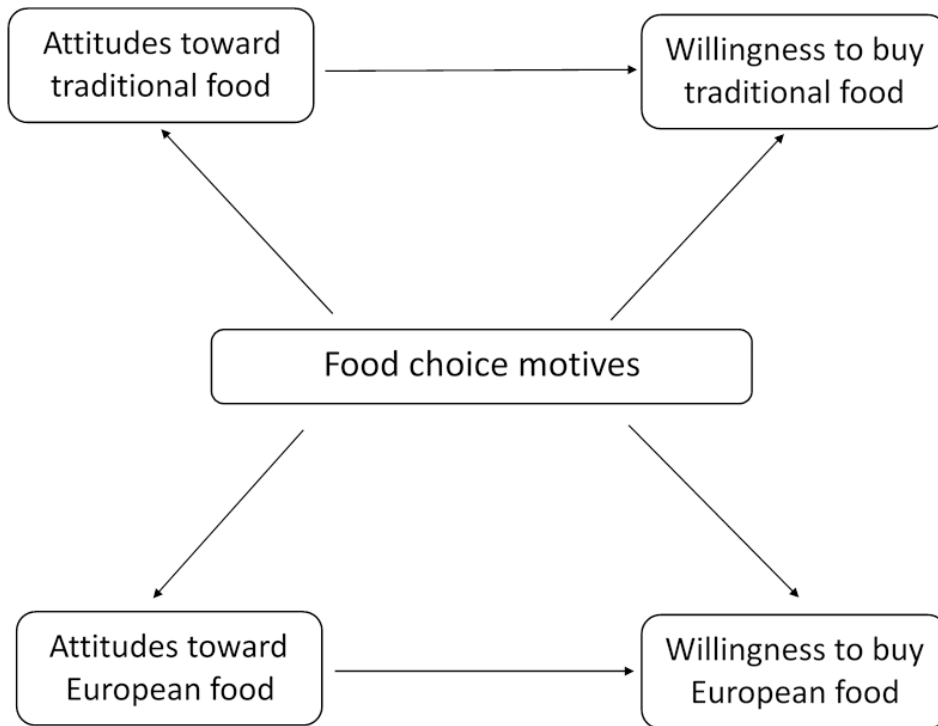
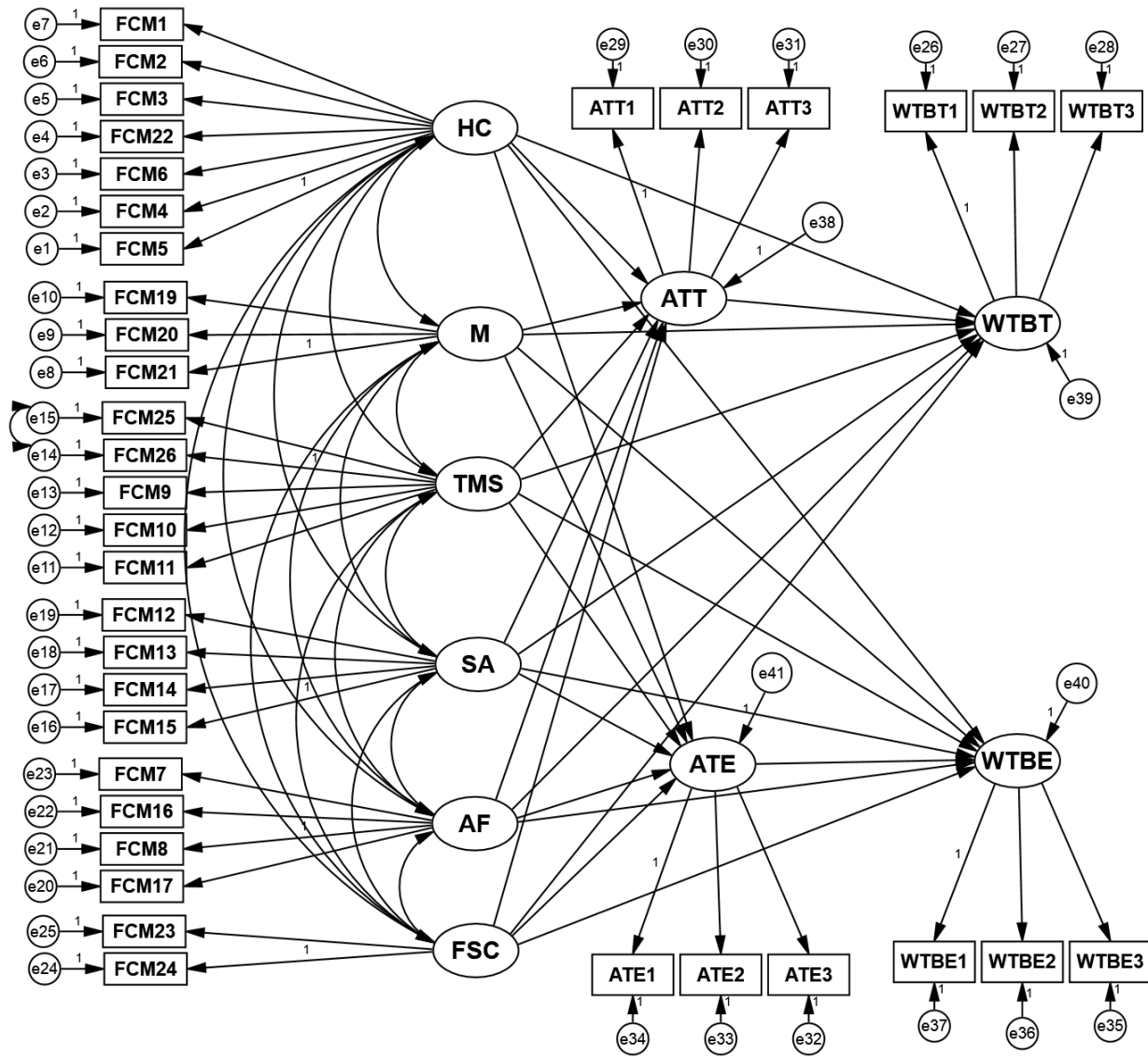


Figure 1. Hypothetical model associating FCMs with attitudes and purchase intentions toward traditional food and European food



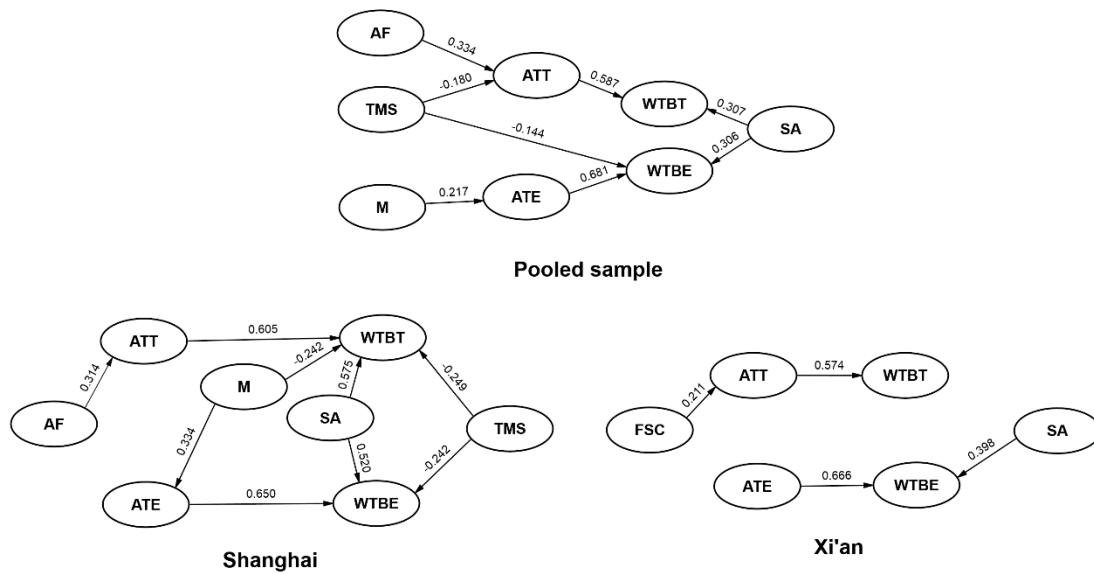
2 **Figure 2. Structural equation model for path analysis using AMOS21**

3 **e1-e41: error variables; FCM1-FCM26 (without FCM 18 and 27): for the codes of the observed variables of FCM items, see Table 2 and*
4 *Table 5; HC, M, TMS, SA, AF and FSC: for the codes of the latent variables of the six FCM dimensions, see Table 5; ATT WTBT, ATE, WTBE:*
5 *for the codes of the latent variables of attitudes and purchase intentions toward traditional food and European food, see Table 3; ATT1, ATT2,*
6 *ATT3, WTBT1, WTBT2, WTBT3, ATE1, ATE2, ATE3, WTBE1, WTBE2, WTBE3: for the codes of the observed variables of attitudes and*
7 *purchase intentions toward traditional food and European food, see Table 3.*

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15 **Figure 3. Significant paths with standardized regression weights for the three**

16 **models**

17 * *HC, M, TMS, SA, AF and FSC*: the codes of the latent variables of six FCM
18 *dimensions (see Table 5)*; *ATT WTBT, ATE, WTBE*: the codes of the latent variables
19 *of attitudes and purchase intentions toward traditional food and European food (see*
20 *Table 3).*

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