

## Vienna 2019 Abstract Submission

### Title

Segmenting Chinese Wine Consumers: Using Choice Experiments to Explore Wine Preferences of Generational Cohorts

### I want to submit an abstract for:

Conference Presentation

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### Keywords

choice experiment, random parameters logit, consumer behavior, China, generational cohorts, segmentation

### Research Question

RQ1: Do generational cohorts in China differ in terms of their wine preferences?

RQ2: Is generational cohort segmentation a viable means by which to segment the Chinese wine market?

### Methods

We use data from an online survey featuring a choice experiment with visual shelf simulations of 560 Chinese wine consumers; we split the sample into generational cohorts and estimate Random-Parameters-Logit-Models.

### Results

Kruskal-Wallis and Wilcoxon rank sum tests reveal significant differences in cohort group's wine consumption and information search behavior. The RPL model finds striking differences in preferences for certifications, awards and taste.

### Abstract

Motivation

In traditional and developed wine markets such as Europe and Australia, distinctive wine consumption behaviors have been found between young and older wine consumers. Demographic segmentation based on generation cohorts has been widely applied in wine segmentation studies in western countries as well as in the U.S. and Australia; revealing distinctive consumption characteristics among young and old wine consumers (Mueller et al., 2011). Similarly, wine attributes are valued differently across generations of wine consumers. For example, Millennial consumers in the U.S. attach more importance to medals on wines than other generations of wine

consumers (Atkin & Thach, 2012); and Generation Y consumers in New Zealand pay more than older generations for foreign wines (Fountain & Lamb, 2011).

Understanding the differences in consumer behavior of different generation cohorts can thus help to find effective marketing strategies for wine promotion. However, for the emerging Chinese wine market, it is not clear whether young and older wine consumers exhibit distinct differences in their wine preferences and wine consumption habits. Wine segmentation studies in China, as in the case of Liu et al. (2014), have often been based on the wine drinking behavior of university students. Students, though, are restricted in their lifestyle choices due to financial constraints. Moreover, comparisons with older generations who are distinctively different in their values, consumption attitudes and behaviors (Hung et al., 2007) are missing and thus the drawing of more general marketing implications for the Chinese wine market is limited.

To fill this void, the purpose of this study is an evaluation of differences in wine-related psychographic characteristics as well as preferences for wine attributes among generational cohorts in China as a means by which to develop segmentation strategies within the Chinese wine market. To this end, the following research questions guide this work:

RQ1: Do generational cohorts differ in terms of the image associated with wine as well as their wine preferences?

RQ2: Is generational cohort segmentation a viable means by which to segment the Chinese wine market and to design communication and marketing strategies?

This study seeks to address these questions by analyzing data from an online survey featuring a discrete choice experiment with visual shelf simulations of 560 wine consumers living in major cities across China. By splitting the sample into consumer segments based on generational cohorts of the Chinese population following Tang et al. (2017), this study intends to contribute to a better understanding of the preferences of Chinese wine consumers. Ultimately, the results assist practitioners in better identifying and marketing to heterogeneous consumer groups in China and contribute to the literature on generational cohort segmentation in a new-to-grape-wine market.

## Generational cohorts in China

A generational cohort refers to a group of individuals, who came-off-age during the same time period and grew up involving similar external events (e.g., social and political environment, economic and technological changes). They have thus developed and formed similar values and attitudes that distinguish them from other cohorts (Noble & Schewe, 2003).

Studies on Chinese generational cohorts, which categorize cohorts based on historical events, were able to show distinctive differences in values, consumption attitudes and behaviors. Older generations in China grew up in a political and social environment that was particularly different from those of younger cohorts. They have lived through economic hardship and suffered from the shortage of goods and materials. In contrast, younger generations have received better education and have been exposed to Western popular culture (Hung et al., 2007; Egri & Ralston, 2004; Wang, 2002).

To categorize Chinese generational cohorts, the present study follows a classification of Tang et al. (2017), who identified three generational cohorts: Pre-reform (born before 1978), Reform (born in 1978-1989), and Post-reform (born after 1989). Their division is based on socioeconomic reforms and economic milestones and was initially made to study employee values. However, it is consistent with generational cohorts identified within the general public by Wang (2002).

## Method

### Survey and data collection

The goal of this exploratory research is to examine differences in wine consumption and wine choice in generational cohorts in China. Data were collected in December 2016 using an online survey featuring a discrete choice experiment with visual shelf simulations. Participants were recruited by a market research firm and had to have purchased a bottle of wine within the last six months either for their own consumption or for gift giving. Panelists were ensured about their privacy and had to state their informed consent with participation in a survey on

wine preferences; participation was voluntary and panelists could exit the survey at any time without negative consequences. A total of 600 participants finished the survey. After controlling for speeding and straight-lining as well as respondents who erred in both trap questions, 564 datasets remained for further analysis.

#### Measures and discrete choice experiment

The survey included measures to assess whether generational cohorts differ in their wine consumption frequency; the image they associated with wine, as well as their wine knowledge and wine involvement levels. Respondents reported their past purchasing and consumption behaviors (frequency, location, wine styles) and stated their agreement with psychographic measures on 7-point scales (subjective wine knowledge and wine involvement). To measure the image they associate with wine, respondents were asked to indicate the degree to which they perceive drinking wines as interesting, relaxing, trendy and status-driven on 11-point scales. In order to derive respondents' willingness to pay for wines and their preferences for wine attributes, a discrete choice experiment was designed and analyzed in R (R Core Team, 2018). Literature suggests that Chinese consumers make their wine choices based on quality indicators (e.g., medals), grape variety, vintage, country of origin, recommendations from friends or family, brand awareness, wine flavor description and region of origin (Lockshin et al., 2017). While the vintage was controlled for, a D-Optimal design in 54 choice sets was used to vary seven wine characteristics with three levels each to create different profiles of bottles of red wine for participants to choose from (see Table 1 for attributes and levels). The design was partitioned into nine blocks, so that each respondent faced six choice situations comprising four different bottles of red wine and an opt-out alternative. A random parameters logit (RPL) model was estimated in R and used to test for differences in wine attribute preferences by generational cohorts.

Table 1: Attributes and levels used in the choice experiment

- ) Flavor: Roasted, fruity, spicy
- ) Production technique: Stainless-steel tank, large oak barrel, small oak barrel
- ) Grape variety: A mix of varieties, Cabernet Gernischt, Cabernet Sauvignon
- ) Producer: Small-brand Chinese winery, famous winery in China, small-brand European winery
- ) Award: no award, silver medal, gold medal
- ) Price (in CNY): 49, 139, 229, 319, 409, 499
- ) Certification/Eco-label: None, Green Food, Organic Food

#### Analysis and results

##### Sample characteristics

The sample comprises 564 Chinese consumers, with 32% of the sample belonging to the Pre-reform cohort (> 38 years), 56% from the Reform cohort (27-38 years), and 12% from the Post-reform cohort (< 27 years). Responses were collected in major Chinese cities: about 70% of respondents lived in Beijing, Shanghai and Guangzhou; the remainder of the sample in tier II cities. 53% of respondents were male. The median age of respondents was 36 years; the sample average monthly income was 23,454 CNY.

##### Analysis of consumption behavior, wine image and psychographics

Chi-square tests, Kruskal-Wallis and Wilcoxon rank sum tests are used to compare the cohort group's consumption and information behavior as well as psychographic characteristics. While there was no difference in the cohort group's interest in wine ( $p=0.322$ ), the test for purchase frequency revealed significant differences between the Pre-reform group and the Post-reform ( $p<0.031$ ) and the Reform cohort ( $p<0.001$ ); with the younger generations purchasing wine more frequently. The Reform group reports significantly higher subjective wine knowledge and wine involvement levels than the other two segments. The test results further reveal a significant difference for price-value inferences, with the Reform group more strongly associating a higher price with better wine quality than the youngest and oldest cohorts ( $p<0.032$ ). This also reflects the notion of drinking wine as a symbol of status. Again, for the Reform group this applies more strongly than for the Pre-reform group ( $p<0.006$ ). The test for the perception of wine as being hip and fashionable suggests no differences in the trendy image among cohorts

( $p=0.07$ ). In addition, drinking wine is strongly perceived as relaxing across groups ( $p=0.354$ ). Still, the Post-reform cohort is the one most likely to drink wine after work to relax ( $p=0.005$ ).

#### Analysis of wine attribute preferences

Initial results of the RPL model confirm differences in wine preferences among Chinese generational cohorts but also highlight homogeneous preferences for some attributes. First, the price coefficient was negative and significant; but with the Pre-reform group being more price-sensitive than the Reform group. The most striking differences were found in preferences for certifications, awards and taste. While the Post-reform cohort derived the highest utility from organic and green food certifications the Pre-reform cohort did not value either label. A silver medal was preferred to a wine without an award by the Post-reform cohort; while surprisingly Pre-reform and Reform cohorts preferred a wine with no award over one with a silver medal. All cohorts still derived significant positive utility from a gold medal. In fact, the Post-reform cohort derived the highest utility. Fruity and spicy flavors were preferred by the Reform and Pre-reform cohorts. In contrast, wines claiming a roasted flavor were preferred by the Post-reform cohort. Assessing the influence of brands, identical preferences become evident. Regarding origin, a small (unknown) Chinese brand was less likely to be chosen than a large Chinese brand; while the choice of a small European winery was more likely across cohorts.

#### Outlook

This study suggests that generational cohort segmentation is a viable means by which to segment the Chinese wine market. Further analysis will explore differences between generational cohorts in more detail, for example by estimating differences in relative wine attribute importance. In addition, willingness to pay estimates will be derived. Ultimately, the results assist practitioners in better identifying heterogeneous consumer groups in China and will contribute to the design of marketing strategies.

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## **Segmenting Chinese Wine Consumers: Using Choice Experiments to Explore Wine Preferences of Generational Cohorts** (extended abstract)

### **Motivation**

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## **Analysis and results**

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## **Outlook**

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