Title: Influencing consumer choice: Short and medium term effect of country of origin information on wine choice

Abstract: The aim of this study was to verify what factors influence the likelihood of wine choice in a developing wine market (China). Previous studies have shown that country of origin is either the first or second most important choice cue for a product such as wine, with consumers relying on country perception and associations. In this study, the same respondents completed a repeated discrete choice experiment, with simulated wine bottles on a shelf, to test the effectiveness of different messages about Australia, a relatively new supplier of wine to this market. In the first experiment, messages were shown in an advertorial format as a way of building consumer associations. The second experiment assessed messages' memory decay after approximately ten days. Wine quality ratings were the most important attribute to influence choice, while country of origin messages increased the relative attribute importance for country, which practically doubled for most of the articles. The messages about clean environment and the taste of the wine were the most effective in increasing choice of wine in both the short and medium term. Consumer choices changed overtime and the results provided evidence regarding the retest reliability of repeated choice experiments. Respondents of the control group became considerably more price sensitive in their wine choice in Stage 2. Overall, repeated discrete choice experiment methodology provided useful insights into the decay effect of advertorial messages over a 10 day period and can be applied in any relatively high involvement product type in specific markets.
Dear Sara,

Please see revised version of the manuscript “Influencing consumer choice: Short and medium term effect of country of origin information on wine choice” for publication in Food Quality and Preference, co-authored by Simone Mueller Loose, Larry Lockshin and Leigh Francis. All authors have made significant contributions and are in agreement to the content of the manuscript and its review.

We thank the reviewers for the constructive suggestions, which we have addressed either in the text or in the response to reviewers document. As a result the manuscript has improved its quality. Thank you for your consideration of this manuscript.

Sincerely,

Patricia Osidacz Williamson
Reviewer #1:

*It is an interesting topic.*

*The paper is well written, but several changes required to clarify the results and improve the paper presentation.*

*It will be interesting to see the influence of the articles on wine choice after a longer period of time, maybe a month or more.*

We are pleased the reviewer found the topic interesting and the paper well-written. It would indeed be very interesting to test the longer term influence of the articles and even at which point the articles would no longer be influential. Unfortunately this was out of the scope of this particular project. Nevertheless, this is a great idea for a future study. Thank you very much for your constructive comments; we hope we were successful in addressing them.

1. **Line 174:** "...recruited on the same basis as the real test". I suggest adding "(see section 2.4)". This has been added

2. **Section 2.3.4. Choice experiment design, line 261:** please explain the design $8^2 \times 4^4 \times 2^2$ and provide reference to Ngene (Choice-Metrics).

   We believe there are enough details explaining the design in the manuscript. The term $8^2 \times 4^4 \times 2^2$ refers to 2 attributes with 8 levels, four attributes with four levels and 2 attributes with 2 levels. This is the universal format to describe statistical designs, which is also common in DCE papers in FQAP.

3. **Line 289, "(Toluna)".** I assume that this is a commercial recruitment agency. I am not sure whether the FQAP readers are familiar with this agency. More information is required (such as reference or website, address etc.)

   Toluna’s details have been added

4. **Table 3:** Household income per year. It worth mentioning (as a footnote) what is the average or the median household income per year.

   The Table should actually say household income per month, which has been fixed and the average per capita income of urban residents according to 2011 National Bureau of Statistics of China was added as a Table footnote.

5. **The authors present four research questions. In the results section the authors answer all research questions but did not indicate which research question they answer after each analysis (except for RQ1 and RQ3).**

   Thanks for the suggestion, we have now indicated in the Results text where each question is answered (RQ1 to RQ4)

6. **The "Results" section should be reorganized.**
   
   a. **Section 4.1:** I suggest to develop this section to be clear for the readers.

   An example has been added for clarification

   b. **The authors refer to Table 5 and then to Table 4. Check the order of the Tables and the text referring to the Tables.**

   Thanks for pointing that out, the text has been rearranged to follow a logical order
c. **Tables 4 and 9, the probability p=0.** The probability should be p<0.01 (or any other value) **but not 0.**

Probabilities have been changed to p<0.001

d. **Line 349: "...relative attribute importance...", is it percentage? Please clarify.**

The word percentage has been added to the text (now Line 353)
e. **Line 350: (see Table 5) should be Table 6.**

Table 5 was correct. The term ‘attribute’ was added to the text plus a reference to the County row in Table 5 to avoid confusion (now Line 354).

f. **Tables 5, 6, 7 and 8: the sum of each column should be 100 (the sum of several columns is 101). Be consistent with the presentation of the results.** For example line 376 "down to 11.7% from 24.7%" while in the Tables the values are 12 and 25 (Tables 7 and 5, respectively).

This is a round up effect – the original values add to 100 when they have their decimals. Our preference is to show tables without decimal points when possible, as it is easier to communicate to the readers the size of the effect.

Values have been rounded in Line 388 to keep consistence with the Tables.

g. **Market share in Tables 5 and 7, better presenting charts instead of Tables. It is worth mentioning how the market share was predicted.**

Please see Data analysis section for the description of market share calculation.

Market share tables are actually Table 6 and Table 8. Bar charts have previously been produced to show this data, but there are too many bars and the charts are more confusing to read. Andrew Ehrenberg has shown that tables are easier to read than complex charts (see Ehrenberg, A., 2000, "Data Reduction", Journal of Empirical Generalisations in Marketing Science, Vol 5, No.1) and we would prefer to leave as it is.

h. **Line 372: which attributes showed significant differences except the country? What is the significance level?**

To improve clarity we have changed this sentence to: ‘The articles had very small or no influence on all the attributes other than country’ (see Line 383). Due to limited space we can’t show the Wald= and p-values for all attributes for each article.

i. **Line 378: clarify the statement.**

In the original document Line 378 said ‘For instance, country importance for Article 2 was about three times as high as in the control; up from 2.3 in Stage 1’. This is now in Line 390. A reference to the Tables and their rows has been added to improve clarity.
Reviewer #2: the paper is well written and summarises/presents a solid piece of research with a good rigorous approach. The paper presents findings that will assist researchers in this field and others across a broader consumer choice field. There is solid empirical work to support previous research in this broad area and also enough up to date data to highlight important factors for those practicing marketing to keep in mind when designing strategy and marketing/promotion efforts.

The research questions addressed are of use to researchers and practitioners and offer much to further research in this field as the data collected and discussed bridge both research and practice - in the emerging market concept this is of particular use.

I207 talks about pre-test to ensure no offence to Chinese culture - nice to know if any thing else was discussed/noted with regards preference or liking, or was it limited to 'no-go' labels. I have some concerns with the Brand chosen 'Victoria Estate' as Victoria itself is a region/origin so the brand name chosen might influence results with those aware of Vicdoria, which as one of Australia's major states is well likely. I'd suggest some talk to clarify/neutralise this concern.

As a reviewer, I'd like to offer more constructive feedback to assist in further developing this, but I can't as it hits its aims, is well executed and written up and offers readers, from research and practice, marketing and sensorial science a very good paper.

Thank you for your kind words and comments about our research.

1. Label pre-tests - We did a series of pre-tests with native Chinese respondents in Australia and in China to assure labels were not offensive and also to choose the most appropriate design when there was more than one label created for a particular classification. We also developed a label association exercise to assess Chinese consumer’s associations with each label, and found very interesting results with clear preferences. As the type of label was not particularly important for wine choice compared to ratings, price or country we did not report these findings in this manuscript, but they could be suitable for a future publication.

2. The Victoria Estate brand name was also assessed in one of the pre-tests and the feedback was that there was no clear association with Australia, and it was classy and easily accepted and understood by most of the Chinese. We don’t know how many of the respondents have visited Australia and how many of them would recognise the name but we feel that this number would not be relevant to influence the results. A sentence about the pre-test of the brand has been added to the manuscript.
Influencing consumer choice: Short and medium term effect of country of origin information on wine choice

- Information about a country had a considerable impact on choice
- The effect was still observed in the medium term (after 10 days)
- Buyers’ reviews were the most important attribute influencing choice of wine
- Messages about environment and taste of wine were the most effective
- Low test-retest reliability of choice experiment in an emerging market
Influencing consumer choice: Short and medium term effect of country of origin information on wine choice

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Abstract

The aim of this study was to verify what factors influence the likelihood of wine choice in a developing wine market (China). Previous studies have shown that country of origin is either the first or second most important choice cue for a product such as wine, with consumers relying on country perception and associations. In this study, the same respondents completed a repeated discrete choice experiment, with simulated wine bottles on a shelf, to test the effectiveness of different messages about Australia, a relatively new supplier of wine to this market. In the first experiment, messages were shown in an advertorial format as a way of building consumer associations. The second experiment assessed messages’ memory decay after approximately ten days. Wine quality ratings were the most important attribute to influence choice, while country of origin messages increased the relative attribute importance for country, which practically doubled for most of the articles. The messages about clean environment and the taste of the wine were the most effective in increasing choice of wine in both the short and medium term. Consumer choices changed overtime and the results provided evidence regarding the retest reliability of repeated choice experiments. Respondents of the control group became considerably more price sensitive in their wine choice in Stage 2. Overall, repeated discrete choice experiment methodology provided useful insights into the decay effect of advertorial messages over a 10 day period and can be applied in any relatively high involvement product type in specific markets.

Key words: wine, discrete choice experiment, China, advertorial, country of origin
1 Introduction and Background

A profitable food or beverage business needs to understand what influences a shopper to choose a product when entering a new market currently dominated by other producers. Although China is currently the third most important destination for Australian bottled wine exports globally (Euromonitor, 2015a), Australian wine still has a tall wall to climb in China: the strong local industry produces wines for domestic consumption, while the long established traditional European wines make French wines the significant leaders of the market in China. Together Chinese and French wines account for almost 90% of sales by volume in 2013 (Hermoso, 2014). Although approximately 80% of this consumption volume is supplied by domestic wines, France is dominant in mental availability having the broadest and highest magnitude of associations in Country Wine Perception (CWP) measurement (Euromonitor, 2015a). Australia is currently only fourth in country awareness among Chinese imported wine consumers (Corsi et al., 2014). China is a very rapidly growing red wine market, with red wine volume having a volume growth rate of 66% from 2009 to 2014 (Euromonitor, 2015b), and 92% of the consumption of still wine in 2013 being red (Hermoso, 2014). In this rapidly changing market it is of interest to identify whether contextual information can have a positive impact on the image of Australian wines over French or Chinese wines as well as identify the effect of the typical extrinsic attributes associated with red wine choice (Lockshin et al., 2006).

The wine price, region of origin, grape variety, and brand are the most frequently mentioned extrinsic cues that will influence wine consumers (Goodman et al., 2008, Chrea et al., 2010). Information about the country of origin (COO) of a product generates expectations related to the image of that country, which will influence beliefs related to the particular attributes of products from that country (Erickson et al., 1984). COO creates secondary associations for brands and attributes, so that associations and beliefs related to the country can be transferred to the brand. Thus it is expected that country of origin would be a strong choice criterion for luxury and premium food products such as wine, especially for a new-to wine country. Indeed Perrouty et al. (2006) found that less experienced consumers pay more attention to wine origin cues and it has been observed (Combris et al., 1997) that even wine experts...
can be strongly influenced by the information of the region of origin when tasting a wine. Piron (2000) showed that country of origin (COO) has a stronger effect for a luxury product like wine in this market. In reviewing the literature, Lockshin and Corsi (2012) showed that the region or COO are key wine choice drivers, and are even more important for higher involvement buyers. Country of origin and price appear as the most important cues for Chinese consumers when choosing a wine (Hu et al., 2008, Yu et al., 2009, Balestrini and Gamble, 2006, Rastegar, 2012, Goodman, 2009, Osidacz et al., 2011). COO was also the most important wine attribute for consumers in Hong Kong (Tang et al., 2015), although price was not included in this study.

With Chinese consumers relying on country perceptions when choosing a wine and having France as the top-of-mind imported wine country, one way to build consumer associations for a relatively new player in the market place is through advertising. Consumers seek product information provided by media through editorial content voluntarily and mostly intentionally, but have a tendency to avoid exposure to advertising (Eisend and Kuster, 2011). Ogilvy and Raphaelson (1982) reported that news or an appealing story added to illustrations increased the chances of attracting consumers’ attention in magazine advertisements. Advertorials were found to be more effective than explicit advertising since they combine the effect of publicity, information and advertising, resulting in a higher motivation to process information compared to conventional advertising methods and give rise to an increased number of cognitive responses (Eisend and Kuster, 2011). Hence, print advertising presented as informative articles (advertorials) about new suppliers such as Australia are likely to influence better educated and potentially more involved consumers. This leads to the first research question (RQ) of this study:

**RQ1. Does a positive message about Australia increase the probability of choice of Australian wine compared to French or Chinese wine immediately after exposure?**

If the advertorial is a successful strategy, it is of interest to identify the type of message that would most influence this market to choose Australian wine. Different COO associations have been identified in the literature; where a product is made can signal key considerations in consumers’
minds at the point of purchase, such as safety and cleanliness (Iversen et al., 1998); quality (Thakor and Lavack, 2003, Insch and McBride, 2004); environmental standards; tourism (Lee and Lockshin, 2011, Elliot et al., 2011, Stepchenkova, 2015); luxury or tradition (Godey et al., 2011). Accordingly, the second research question is:

RQ2. Which message about Australia is most effective in influencing Chinese consumers to choose Australian wine?

There is common agreement in the advertising literature that each exposure to an advertisement builds awareness, which will then decline if there has not been any recent exposure (Broadbent, 1984). Thus marketing effectiveness will depend on the amount of decay of a campaign. The way we process information can influence how we remember it, and more deeply processed information tends to be forgotten less (Anderson, 2000, Bower, 1998). Advertising works mainly by refreshing or building memory structures that will improve the chance of a brand being noticed in buying situations (Sharp, 2010). A large number of research studies have linked advertising expenditures to sales or consumer awareness to measure its efficacy (Bass et al., 2007). For example, Naik (1999) and Clarke (1976) used decline in real sales or market share data to measure the memory decay effect of advertising campaigns, while Aravindakshan (2011) measured the decline of awareness when an advertising campaign stops. Batra (1995) researched the effect of advertising campaigns on consumers’ awareness and found a greater effect for less-visible brands. Interestingly, to the authors’ knowledge there has been no published study investigating the effect of a single advertisement or point of sale exposure on future consumption in the food research literature. The third objective of this research study was thus to verify how quickly the effect of the advertorial exposure decreases or how the message effect will prevail over a typical purchase-repurchase interval of about 10 days:

RQ3. Does a message about Australia increase the probability of choice of Australian wine compared to French or Chinese wine following a typical purchase-repurchase interval after the first exposure?

The challenge of identifying the key attributes and influences for consumer wine choice is even more difficult in a market where the category is in the early stages of development. Understanding the
traditional drivers of wine choice may not be viable in a market where wine has not been a traditional beverage and is less often consumed with food as it is in developed markets (Lockshin, 2014). This investigation will also model consumers’ choice with other wine cues, allowing the current major drivers of choice to be identified. The fourth and final research question is thus related to drivers of choice when choosing wine:

RQ4. What are the main factors influencing wine choice by Chinese consumers?

In summary, this study was designed to investigate the short and medium term effect of communication messages about a single country (Australia) in influencing choice of wine from that country for Chinese consumers, compared to products originating from other countries. Given the significant growth potential of the Chinese market, it is of great relevance to study Chinese wine consumer behaviour, arguably the best example at present of a rapidly growing new-to-wine culture. This study investigates the main attributes influencing wine choice by Chinese consumers and includes attributes shown to be important in previous research, such as country of origin, packaging, and price as well as testing the decay effect of different positioning statements for the country of origin presented as advertorials.

2 Materials and Methods

2.1 Experimental Design

Unless one alternative or attribute clearly dominates, it is challenging to accurately identify the most important attribute by simply asking consumers to consciously rate questions on the importance of various intrinsic and extrinsic attributes (Goodman et al., 2008). Emotional motivations and non-cognitive drivers can be strong underlying components in choice. A choice experiment with visual shelf simulation was chosen as the appropriate method to test the effect of advertorials. Discrete choice experiments (DCE) are a powerful and useful method in marketing to measure the importance of an attribute indirectly from respondents’ choices to stimuli that differ in attribute levels, without requiring the respondent to be explicitly attentive to each attribute (Louviere et al., 2000, Louviere
and Islam, 2008). The attributes are presented in various combinations, called product concepts, and
the respondent is forced to make trade-offs between the concepts, comparable to realistic product
purchases (Cohen, 2009). The DCE method can be applied using multi-media and graphical displays
to simulate store shelves and this approach has been used to measure the effects of extrinsic cues
before in wine (Mueller et al., 2010a, Mueller et al., 2010c, Lockshin and Hall, 2003). Discrete choice
modelling has been successfully used by Perrouty (2006) to assess the importance of region of origin
in wine purchase in four European countries. (Mueller et al., 2010b, Mueller et al., 2010c) have also
simulated wine purchasing, through choice experiments.

A two-stage research design was developed:

Stage 1: short term effect of advertorials – test the effect of COO advertorials on wine choice relative
to a control condition (wine-unrelated advertorial). Respondents read an Australia-related article
before the choice experiment or a control article describing South American coffee.

Stage 2: medium term effect of advertorials – the same respondents repeated an identical choice
experiment approximately ten days after the first experiment, without being exposed to further
advertorial information, to test any medium term effect relative to their initial choices. This second
experiment assessed the memory decay effect of the article over time more closely simulating a real-
world situation, where people tend to choose a product some time after seeing an advertisement or
receiving information about it. Nearly half of the original consumers (828) repeated an identical
choice task a minimum of seven days (75% of consumers completed the test within seven to 15 days,
average 10 days) after having read one of the articles. The same respondents saw the same version of
the DCE that they had previously seen using the same 16 shelf-based choice tasks. Respondents
proceeded with their normal life activities in between studies and there was no control of the
information about Australia that they saw in the interim.
2.2 Country of Origin Messages

Five short advertorial-type articles were created and subsequently refined as described below to communicate different messages about Australia that could have a positive effect on the choice of Australian wines over French or Chinese wine. Message topics were chosen based on the different COO associations that have been identified in the literature plus industry feedback on relevance after in-depth interviews with 12 Australian wine marketing experts, including marketing managers in large and medium size wineries plus those in a market development body dealing with China on a regular basis. A control article unrelated to wine was also created. The control group was asked to read an article describing coffee production in South America which can be assumed to not have affected their wine choice. Thus the control sample can be interpreted to reflect what is normally important for Chinese consumers when they choose wines with no wine-related information presented. Respondents were given one of the six articles to read immediately before conducting the choice task. Consumers were randomly assigned to each article. Articles were translated into Chinese by a native speaker with a wine education background and back-translated by an independent bilingual translator.

To check that participants could perceive the messages as intended the articles went through several manipulation checks. Firstly, a pre-test was conducted with 50 newly arrived Chinese university students in Australia, followed by a revision of the articles and then by a second pre-test with 310 red wine consumers in China, recruited on the same basis as the real test (see section 2.4). The most relevant pictures associated with the intended messages were selected. Break-out text was then included, all articles were shortened to approximately 110 words and re-designed by a local Chinese professional graphic designer to mimic Chinese magazine articles. A 30-second timer before the page could be changed was added to the article page to encourage respondents to read the entire article. A manipulation check was also added to the main test to verify the Australia country-image association. A ‘pick-any’ or check-all-that-apply (CATA) methodology was chosen, including other countries for comparison with randomised presentation of columns and rows, which has the advantage of being
relatively easy and quick for the respondents. The list of items and countries used in the manipulation check question is shown in Appendix A.

The six articles were balanced in the DCE versions, resulting in 248 randomly assigned respondents per article in the first experiment.

Figure 1 shows an example of the articles. The articles’ main concepts are shown in Table 1. More details can be found in Appendix B.

Figure 1 Example of one article referring to the taste of Australian wine. Five articles were created plus a control; each consumer read one article prior to the choice experiment.

Table 1: Main concepts of the six advertorial articles, which were presented to Chinese consumers prior to the wine choice experiment.

<table>
<thead>
<tr>
<th>Article</th>
<th>Main Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 1 – Tourism</td>
<td>Australia was voted as one of the most beautiful, relaxed and friendly places to visit.</td>
</tr>
<tr>
<td>Article 2 – Environment</td>
<td>Australia is renowned as a producer of fresh, healthy and natural food and wine from its clean water, clean air and clean soil</td>
</tr>
<tr>
<td>Article 3 – Safety</td>
<td>Strong Australian government regulation has resulted in a very strong reputation for having products, which are safe, reliable and of high quality</td>
</tr>
<tr>
<td>Article 4 – Tradition</td>
<td>Australian wines have a unique combination of history and tradition stretching back over 150 years</td>
</tr>
<tr>
<td>Article 5 – Tasting</td>
<td>Australian wines were rated the best tasting of all the wines by Chinese consumers.</td>
</tr>
<tr>
<td>Article 6 - Control</td>
<td>Growers in South America are developing organic coffee plantations after seeing the benefits to the environment and the improved quality</td>
</tr>
</tbody>
</table>

2.3 Choice experiment

The shelf simulation was designed to display wines as realistically as possible. The most relevant choice attributes for wine were included to avoid possible overestimating the effect of COO. There were 13 attributes in total: five were constant (not varied) and eight were varied according to an experimental design.

2.3.1 Attributes and levels varied in experiment

The choice experiment comprised a wine shelf simulator where different attributes and levels were varied. Attributes had two, four or eight levels (see Table 2):
Table 2: Attributes and levels varied in the online choice experiment

<table>
<thead>
<tr>
<th>Attribute</th>
<th># Levels</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label style</td>
<td>8</td>
<td>Prestigious, Stately, Modern classic, Modern contemporary, Modern vibrant, Elegant contemporary, Eclectic, Light-hearted</td>
</tr>
<tr>
<td>Price</td>
<td>8</td>
<td>¥70, ¥130, ¥190, ¥250, ¥310, ¥370, ¥430, ¥490</td>
</tr>
<tr>
<td>Grape variety</td>
<td>4</td>
<td>Cabernet Sauvignon, Shiraz, Pinot Noir, Dry Red Wine</td>
</tr>
<tr>
<td>Country</td>
<td>4</td>
<td>France, China, Australia, Italy</td>
</tr>
<tr>
<td>Buyer review</td>
<td>4</td>
<td>99 points, 92 points, none, none</td>
</tr>
<tr>
<td>Expert rating</td>
<td>4</td>
<td>96 points, 89 points, none, none</td>
</tr>
<tr>
<td>Closure</td>
<td>2</td>
<td>Screw cap, Natural cork</td>
</tr>
<tr>
<td>Medals</td>
<td>2</td>
<td>Gold, none</td>
</tr>
</tbody>
</table>

Label style: an assessment of labels available in the Chinese market was performed, label archetypes were identified and cross-checked with previously researched label styles perceived to be distinctly different by Chinese wine consumers of imported wines by a global wine research agency, Wine Intelligence (Halstead, 2012, Halstead and Su, 2012). Eight labels were created by a professional graphic designer who designed unique labels to fit with the style description. Labels and brand name were pre-evaluated by Chinese locals to avoid potential offence to Chinese culture, the brand name was easily accepted and understood by most of Chinese, with no direct association with any particular country.

Price: most of the imported wines sold online at the time of the study (according to website www.yesmywine.com) were in the range RMB 70-500. Eight price points were selected within this range with increments of RMB 60.

Grape Variety: The most common red grapes in Australia were selected. Dry red wine is a common denomination in Chinese wines (see www.yesmywine.com).
Country of origin: selected based on country recognition as a red wine producer (Medder and Howard, 2010, Corsi et al., 2014).

Buyer review (Store rating): Word of mouth and reviews have been recognised as popular and trusted information channels for Chinese consumers (Camillo, 2012). The yesmywine.com website is a popular online shop and an important tool for Chinese consumers to obtain information about wines. The scores’ distribution from the online store website was 99 pts- 100 wines, 95-98 pts – 60 wines, 90-94 pts – over 500 wines (range from 65 to 99). Lower (92) and higher (99) point brackets were chosen to check the effects of buyer reviews. To avoid an over representation of buyer reviews in the visual shelf simulation the attribute was operationalised with four levels, two of which had no rating. Thus, only fifty percent of the wines in the shelf displayed a buyer review.

Expert rating: Looking at a well-regarded wine writer from Australia as an example, in his Top 100 wines in 2012 (www.winecompanion.com.au), 45% of the wines over AUD$20 scored 96 points (n=80). The lowest score was 89 for under AU$20 wines. Therefore, 96 points was chosen as a realistic high and 89 points as a realistic low expert score. Like the buyer review, expert ratings had four levels with two none levels to avoid over representation.

Closure: screw cap and natural cork are the most common closures in the market. The cork closure was realistically presented covered with a black capsule/sleeve.

Medals: A gold medal with the Chinese symbol for gold written in the middle and “Gold medal” English words on the edges.

2.3.2 Constant attributes

To make the wines appear realistic five attributes were held constant across all wines: brand, vintage, alcohol content, volume and bottle style.

All wines had the same fictitious brand, aimed to be culturally neutral, and not have any negative associations in Chinese. Victoria Estate was chosen for its familiarity to Chinese general consumers,
being relatively neutral by middle-class Chinese, according to a native Chinese source, and not sounding offensive in Chinese. Estate gives a quality wine connotation. The brand name was displayed in English for both Chinese and international wines. An arbitrary vintage was chosen, 2008, for all wines. All wines were presented in a Bordeaux style bottle shape.

The alcohol was indicated as 13% vol for international wines. For Chinese wines, the Chinese word for alcohol was added before the number (酒精度 13% vol). The standard bottle size (750 ml) was used. For Chinese wines, the Chinese symbols for volume was added before the number (净含量 750ml).

2.3.3 Visual shelf simulation

The visual shelf simulation had to find a middle ground between representing a large shelf with numerous wines and the presentation on a computer screen without respondents having to scroll. Five bottles per screen was determined as the optimal number, similar to other research using visual wine shelves (Mueller Loose and Remaud, 2013, Mueller et al., 2010a).

Store and rating quality ratings were displayed in ‘shelf talkers’, along with the country and grape variety name in Chinese. All consumers received the same contextual information: they were asked to select a wine that they would purchase for drinking at home for a dinner with family or friends. Figure 2 shows an example of a simulated shelf.

After each choice task, consumers were given a none-option when asked to confirm if they would really want to purchase the chosen bottle.

Figure 2 Simulated shelf example.

2.3.4 Choice experiment design

To combine the eight attribute levels into choice stimuli an orthogonal main effects design $8^2 \times 4^4 \times 2^2$ in 128 sets was developed in the software package Ngene (Choice-Metrics, www.choice-metrics.com). The following three specifications were set in Ngene: 1) Attribute level
co-appearance should be balanced (simultaneous orthogonality across all attribute levels); 2) Positive expected utilities were specified for the medal and the higher ratings compared to no medal and lower or no ratings. The Ngene design algorithm aims to build in trade-offs between rating and medal levels and thereby reduces their overrepresentation within a set. This assumption is also backed by empirical wine choice research finding strong consumer preferences for wine ratings and medals (Mueller Loose and Remaud, 2013, Mueller et al., 2010a); 3) No expected utilities were specified for the five other attributes as this would result in very balanced designs where each attribute level only appeared once in a set, which would be likely to induce decision artefacts. Also, existing wine choice research suggests strong consumer heterogeneity in preferences for label styles, grape varieties, country of origin and price, which does not warrant a utility pre-specification. The optimisation algorithm was stopped after 15,000 iterations. The overall design of 128 sets was split into eight versions of 16 sets to which respondents were randomly allocated in the first choice experiment. Within each block the order of choice sets was randomised. To avoid variance from different design versions in the second choice experiment (Stage 2) each respondent was assigned to the same design version completed in the first experiment.

2.4 Respondents

Regular red wine drinkers and buyers of imported wine of Chinese ethnic origin were recruited from three major cities in China. See Table 3 for consumers’ socio-demographic information, as compared to a similar/representative sample of Chinese grape wine drinkers. There is an overrepresentation of respondents from Beijing and Guangzhou, since the recruitment criteria required equal numbers of consumers in each city. Moreover, there are more high income earners, probably reflecting the fact that respondents had to buy imported wine at least once every six months to classify for this study. Of the 828 consumers tested, 84% drank red grape wine at least once a week. All respondents were over 18 years of age. Just under one third of the respondents (29%) were new-to-wine drinkers, who had been drinking red wine for five years or less. Only 5% of the consumers recruited had been drinking
wine for longer than 20 years. Respondents were recruited through a panel recruitment agency (Toluna - www.toluna-group.com).

Table 3: Socio-demographics information of 828 Chinese consumers of red wine

<table>
<thead>
<tr>
<th>Consumers overview</th>
<th>Consumer sample n=828 (%)</th>
<th>Chinese wine consumers* (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>59</td>
<td>67</td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
<td>33</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>30-44</td>
<td>64</td>
<td>62</td>
</tr>
<tr>
<td>45-62</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>City</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beijing</td>
<td>29</td>
<td>15</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>32</td>
<td>19</td>
</tr>
<tr>
<td>Shanghai</td>
<td>39</td>
<td>43</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University degree or above</td>
<td>83</td>
<td>81</td>
</tr>
<tr>
<td>Household income per month**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;RMB 3,999</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RMB 4,000 - 5,999</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>RMB 6,000 - 9,999</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>More than RMB 10,000</td>
<td>72</td>
<td>50</td>
</tr>
<tr>
<td>How long drinking red wine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 years</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2-5 years</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>6-10 years</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>11-20 years</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>&gt;20 years</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Frequency of red wine consumption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than once a week</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Once a week</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Once or twice per month</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Only on special occasions</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

*(Corsi et al., 2014)

**average per capita income of urban residents in 2011 was RMB 23,979 (National Bureau of Statistics of China)
3 Data analysis

Three measures were derived to operationalise the effect of the country-specific advertorials on consumers’ wine choice for both experiments.

1) To test if an article had a significant effect on the impact of the country attribute on consumer choice relative to the control condition the Wald(=) statistic and probability levels were assessed in pair-wise multinomial logit models (Loebnitz et al., 2015). The Wald test is a chi-squared test which tests whether regression coefficients are equal between classes (attributes).

2) To examine if the importance of the country attribute increased through an advertorial attribute, importance was compared on a descriptive level between an article and the control version. Attribute importance values were computed based on an attribute’s relative contribution to explained variance (Log-Likelihood), see Lancsar et al. (2007).

3) To examine if the article changed consumers’ preferences between countries, the relative share of preference across the four countries, also interpretable as market share $M_i$, was calculated from the estimated part worth utilities $u_i$.

$Market\ share = M_i = \frac{\exp (u_i)}{\sum_{N=1}^{N} \exp (u_n)}$

To verify that the attribute importance comparison across stages is valid, choices of the control group in Stage 1 and 2 were compared through a pair-wise choice model (control 1 vs. control 2). To determine DCE reliability, attribute importance should remain stable for the control group.

All three measures were computed separately for both experimental stages to be compared within each stage. Directly comparing measures between Stage 1 and Stage 2 assumes that consumer preferences did not change except for the memory decay effect of the articles. In other words, a valid comparison between stages depends on the test-retest reliability of the discrete choice experiment. So far there is rather limited evidence for reliability of repeated choice experiments (Mørkbak and Olsen, 2015). Those few studies existing recently reviewed by Mørkbak and Olsen (2015) indicate that
Overall choice experiments produce rather stable results when repeated over time. But those studies were limited to established products and services. It could be expected that the test-retest reliability for a product new to an emerging market might be lower, because consumers have not yet formed stable preferences, which might change over time and increasing exposure to the product (Orquin and Mueller Loose, 2013). To determine the DCE reliability, choices of the control group were compared through a pair-wise choice model (control Stage 1 vs. Stage 2) using Latent Gold’s multilevel model feature (LatentGOLD Choice 5.0, Statistical Innovations Inc., Belmont, USA) to take account of the panel data nature. Wald(=) statistics were used to assess if the attributes’ part worth values differed significantly between the two waves. Attribute importances were also compared on a descriptive level. Choice data was analysed using LatentGOLD Choice 5.0.

Chi-square analysis was performed in the manipulation check data, looking for a significant (p<0.05) effect of each article to its related statements.

4 Results

4.1 Manipulation check advertorials

Regarding the manipulation check, Chi-Square analysis revealed a significant effect (p<0.05) for every article in at least one related statement, meaning that respondents rated at least one corresponding statement significantly higher after reading the related article. For example, respondents who read Article 3: Safety, rated the related statement ‘has strict food and wine regulations’ significantly higher for Australia. Therefore we can conclude that respondents interpreted the articles as intended.

4.2 Short-term effect of advertorials on wine choice (Stage 1)

Reading any article about Australia had a substantial effect on wine choice (RQ1). In all pair-wise choice models the articles had a highly significant immediate effect on the choice of the country
attribute (Table 4), although their magnitude differed and was highest for Articles 2: Environment and 5: Taste (RQ2).

Table 4: Article effect on country attribute: Wald(=) statistics (n=828) sorted descending by immediate effect size

<table>
<thead>
<tr>
<th>Article Version</th>
<th>Article effect size (Wald=)</th>
<th>p</th>
<th>Article effect size (Wald=)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 2 Environment</td>
<td>151.4</td>
<td>&lt;0.001</td>
<td>63.7</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Article 5 Taste</td>
<td>146.2</td>
<td>&lt;0.001</td>
<td>71.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Article 3 Safety</td>
<td>97.8</td>
<td>&lt;0.001</td>
<td>26.7</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Article 4 Tradition</td>
<td>93.3</td>
<td>&lt;0.001</td>
<td>29.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Article 1 Tourism</td>
<td>43.1</td>
<td>&lt;0.001</td>
<td>9.7</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Note: Wald(=) statistics indicate the effect size of difference between each article and the control article from pair wise multinomial logit choice models.

The strong effect size of the articles is also reflected in the percentage of relative attribute importance for the attribute country (see Country row in Table 5), which practically doubled compared to the control for all the articles with the exception of Article 1 (Tourism) and increased almost 2.5 times for Article 2. For any article version, country became the most important attribute. The relative ranking of the other attributes (Table 5) remained constant with the exception of price becoming the second most important for readers of Article 5 (Taste). While reading an article strongly increased country importance, it also affected relative country preference (Table 6). The relative market share for Australia increased from 26% in the control condition to 37% for Article 1 (Tourism), up to 49% for Article 2 (Environment). For any article Australia became the most preferred country, replacing France from its first position in the control condition. While readers of the control article chose French wines most commonly, their choices were less strongly influenced by country of origin (Table 5).

Table 5: Stage 1- Attribute importance immediately after exposure to advertorial (percentage, attribute order sorted by importance of control group)
Table 6: Stage 1- Market share (share of preference) by country immediately after exposure to advertorial (percentage)

<table>
<thead>
<tr>
<th>Country</th>
<th>Control Article</th>
<th>Article 1 Tourism</th>
<th>Article 2 Environment</th>
<th>Article 3 Safety</th>
<th>Article 4 Tradition</th>
<th>Article 5 Taste</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>33</td>
<td>27</td>
<td>21</td>
<td>24</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>Australia</td>
<td>26</td>
<td>37</td>
<td>49</td>
<td>44</td>
<td>43</td>
<td>48</td>
</tr>
<tr>
<td>Italy</td>
<td>24</td>
<td>22</td>
<td>17</td>
<td>19</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>China</td>
<td>18</td>
<td>15</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>12</td>
</tr>
</tbody>
</table>

4.3 Control condition – wine choice by Chinese consumers without article effects

The control group read an article not-related to either wine or Australia, which can be assumed to have not affected their wine choice. The store ratings that give guidance on indicative ‘peer review’ of wine quality (wine purchasers’ opinions or buyer reviews) were the most important factor (Table 5). Country of origin (COO) was the second most important attribute, followed by price and expert rating (RQ4). As expected, France had the highest choice value and ‘market share’ (Table 6).

4.4 Medium-term effect of advertorials on wine choice (Stage 2)

The effect of having read a country-related article remained over the time between the choice experiments of Stage 1 and Stage 2 (RQ3). Relative to the control condition all articles still had a significant effect on the impact of the country attribute on wine choice (see Table 4), but their relative effect size as indicated by the Wald(=) statistics decreased. The relative order by choice impact of the articles remained largely the same, with Articles 2 and 5 still having the strongest effect ten days after exposure. The articles had very small or no influence on all the attributes other than country (data not shown).
The time-weakened effect of the articles is also reflected in the country attribute importance, which diminished for each of the articles compared to the DCE conducted immediately after the article exposure (Table 7 compared to Table 5). Surprisingly, the importance of country was also reduced for the control condition (down to 12% from 25%). Interestingly, the ratios of country importance between an article and the control condition increased slightly. For instance, country importance for Article 2 was about three times as high as in the control; up from 2.3 in Stage 1 (see Country rows in Table 5 and Table 7).

Table 7: Stage 2 - Attribute importance approximately ten days after exposure to advertorial (percentage, attribute order sorted by importance of control group)

<table>
<thead>
<tr>
<th></th>
<th>Control Article</th>
<th>Article 1 Tourism</th>
<th>Article 2 Environment</th>
<th>Article 3 Safety</th>
<th>Article 4 Tradition</th>
<th>Article 5 Taste</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>126</td>
<td>138</td>
<td>144</td>
<td>139</td>
<td>134</td>
<td>147</td>
</tr>
<tr>
<td>Price</td>
<td>42</td>
<td>25</td>
<td>24</td>
<td>28</td>
<td>26</td>
<td>36</td>
</tr>
<tr>
<td>Buyer review</td>
<td>23</td>
<td>25</td>
<td>20</td>
<td>22</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>Expert rating</td>
<td>16</td>
<td>19</td>
<td>16</td>
<td>22</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Country</td>
<td>12</td>
<td>22</td>
<td>35</td>
<td>20</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>Label</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Grape</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Closure</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Medal</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The market shares presented in Table 8 show the decay in effect of the advertorials, indicating that ten days after reading the article Australia was still the most chosen country compared to the control. The relative distance to France reduced strongly compared to choices immediately after reading the article (Table 6), indicating a memory decay effect.

Table 8: Stage 2 - Market share (share of preference) by country approximately ten days after exposure to advertorial (percentage)

<table>
<thead>
<tr>
<th>Country</th>
<th>Control Article</th>
<th>Article 1 Tourism</th>
<th>Article 2 Environment</th>
<th>Article 3 Safety</th>
<th>Article 4 Tradition</th>
<th>Article 5 Taste</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>31</td>
<td>29</td>
<td>23</td>
<td>26</td>
<td>26</td>
<td>23</td>
</tr>
<tr>
<td>Australia</td>
<td>25</td>
<td>30</td>
<td>38</td>
<td>33</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>Italy</td>
<td>25</td>
<td>24</td>
<td>23</td>
<td>23</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>China</td>
<td>20</td>
<td>18</td>
<td>16</td>
<td>17</td>
<td>17</td>
<td>16</td>
</tr>
</tbody>
</table>
In assessing the three measures selected to operationalise the effect of the country-specific advertorials, we can conclude that Articles 2 (Environment) and 5 (Taste) overall had the greatest influence (RQ2). While the immediate effect (Wald statistics in Table 4) and relative Australian market shares (Table 6) between articles 2 and 5 are very close, the relative importance of the country attribute in Table 5 is highest for Article 2 (Environment), while Article 4 (Tradition), Article 5 (Taste) and Article 3 (Safety) have similar values. Looking at the medium-term effect over time, again Articles 2 (Environment) and 5 (Taste) showed strongest effect on choices (Table 4) and the country attribute importance of both articles was considerably higher than any other article (Table 7), indicating that they remained most effective over time. While country attribute importance in Stage 2 in Table 7 was slightly higher for Article 2 (Environment), the country share in Table 8 was higher for Article 5 (Taste). In both the short and medium-term, Article 1 (Tourism) was the least effective article in increasing choice of Australian wine.

4.5 Test-Retest reliability of repeated choice experiments

Wine choices of the control group would be expected to remain rather stable between the two stages as they were not affected by any wine article and related memory decay. Surprisingly, the choices comparison of the control group in Stage 1 and 2 reveals that consumers’ choices changed significantly (Table 9). Except for country, grape, medal and closure, the impact of all attributes on wine choice changed significantly between Stage 1 and 2 for the group who read the control article.

Table 9: Test-retest reliability - experimental effect on attribute importance Wald(=) statistics difference between control group Stage 1 and Stage 2.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Article effect size (Wald=)</th>
<th>P</th>
<th>Increased choice probability for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>785</td>
<td>&lt;0.001</td>
<td>low priced wines</td>
</tr>
<tr>
<td>None</td>
<td>50</td>
<td>&lt;0.001</td>
<td>none-option</td>
</tr>
<tr>
<td>Expert rating</td>
<td>38</td>
<td>&lt;0.001</td>
<td>highest rating 96 points</td>
</tr>
<tr>
<td>Label</td>
<td>32</td>
<td>&lt;0.001</td>
<td>modern vibrant, light hearted</td>
</tr>
<tr>
<td>Buyer review</td>
<td>21</td>
<td>&lt;0.001</td>
<td>highest review 99 points</td>
</tr>
<tr>
<td>Country</td>
<td>7</td>
<td>0.06</td>
<td>n.s.</td>
</tr>
</tbody>
</table>
Grape 6 0.12 n.s.
Medal 2 0.22 n.s.
Closure 1 0.37 n.s.

Note: Wald(=) statistics indicate the effect size of difference between each article and the control article from pair-wise multinomial logit choice models n.s.: not significant

The change was particularly pronounced for price, where the effect size change was very high compared to all other attributes. This is also reflected in the attribute importance that increased from 21% to 42%, becoming by far the most important attribute (first columns of Table 5 and Table 7).

Respondents of the control group became considerably more price sensitive in their wine choice in Stage 2. The price demand curves reveal that consumer demand for lower priced wines (< RMB 200) increased in Stage 2 while that for higher priced wines decreased accordingly (Figure 3).

Figure 3 – Test-retest reliability for the control group - price demand curve for Stages 1 and 2

Looking at effect size in Table 9 the second strongest change was observed for “none”, where in Stage 2 respondents became more likely to choose the none-option, which reflects a more selective choice than in Stage 1. For store and expert ratings part worth utilities (not provided here in detail due to space limitations) increased significantly, but their higher impact is not reflected in attribute importance measures, which suggest little change (first columns of Table 5 and Table 7). When interpreting attribute importance it should be considered that its sum always adds up to 100%. Accordingly, the importance of other attributes must decrease when one attribute (e.g. price) increases.

Similarly, attribute importance measures suggest that country became relatively less important in Stage 2, jumping from rank two to four, but according to Table 9 its actual impact on wine choice did not change significantly. This is also reflected in the preference shares between the countries, which are highly similar between the two experiments (Table 6 and Table 8).

The results suggest poor test-retest reliability for the choice experiment. Therefore attribute importance measures cannot be reliably compared between the two stages because they are affected...
by the changed impact attributes had on wine choice in Stage 2. Country preference shares are not
affected by changes of other attributes and are a reliable measure to assess the effects of the articles
between stages.

5 Discussion

5.1 Short-term effect of Australian message on choice

Reading an article about Australia had a substantial effect on wine choice, with country becoming the
most important attribute for all the articles compared to ranking second in the control condition in
Stage 1. Being exposed to information about Australia improved the choice probability of Australian
wines, which were then chosen more often than wines from France. The use of informative articles
through print advertising appears a feasible strategy for wine and food companies as well as industry
bodies to increase sales in export markets. The articles can achieve a larger reach and influence a
greater number of potential wine consumers (supermarkets, restaurants, gift givers) compared to point
of sale advertising in local wine shops. All the articles increased the probability of consumers to
choose Australian wine, but two messages were more effective than the others.

5.2 Most effective Australian message

This study confirms the importance Chinese consumers give to a clean environment and the taste of
the wine to Chinese palates. The message about the fresh, healthy and natural food in Australia due to
its clean environment showed the highest effect on choice of Australian wine over French, Chinese
and Italian and the highest increase in Australian ‘market share’ compared to the control, which is in
line with concerns of contamination in China and the increasing development and importance of the
organic and green food market in China (Thøgersen et al., 2015, McCarthy et al., 2015). The second
most effective message, about the taste of Australian wine would be an alternative. Other studies have
found that consumers usually indicate in questionnaires that the taste of wine is one of the most
important factors when choosing wine (Corsi et al., 2014, Williamson et al., 2012). Future work
should verify these effects in an experiment involving wine tasting. Furthermore, there was a direct
comparison claim with a competitor (France) in the Taste article, which has been shown to attract
attention and thereby enhance purchase intentions for low-share brands (Pechmann and Stewart,
1990). The message related to tourist attractions was the least effective, contradicting what was
expected based on the literature (see Lee and Lockshin, 2011).

Based on these results any marketing communication for Australian wine could place weight on the
most influential messages, whether in explicit advertising or the more subtle use of images in
packaging to reinforce clean, pristine production practices or attractive taste. This study has shown a
range of messages, which could be used as a marketing strategy. It would be valuable to demonstrate
whether combining the two most effective messages would produce a synergistic effect and increase
choice, or in contrast would be detrimental for choice due to competing information. Evidence in the
literature would point to the latter: having one clear, simple message as an overarching theme is
recommended (Spenner and Freeman, 2012). These findings are limited to Australian wine in China
and other countries should adapt the research to their own messages, and not copy the strategy of
already established countries like France.

5.3 Medium-term effect of Australian message on choice

The same two articles (Article 2: Environment and Article 5: Taste) also showed the lowest memory
decay, being the most influential on choice of Australian wine after approximate ten days, although
there was a decline in retention after this time. Advertorial effectiveness will depend on its cumulative
effect over time, including other marketing activities and competitive actions (Cook and Kover,
2014). A cluttered media environment will result in decreased consumer attention, thus reinforcement
is important to assist the maintenance of memory structures, which can be achieved by repeating the
information over time. Investment in repeated advertising and long-term commitment with the
marketing strategy is necessary. In this study, we did not control for what consumers were exposed to
in between tests, and the presence of competing advertising for similar products could have decreased
the effect of the advertorial (Burke and Srull, 1988). Lastly, the articles’ effect can depend on other
individual consumer factors, such as consumer involvement and whether consumers actively seek and
process information about the product (Petty et al., 1983). Future studies could consider splitting consumers based on their degree of involvement and information seeking, which would require an even larger sample set. Nonetheless, given that there was no reinforcement, the important effect of a single article even after ten days shown in this study is surprisingly strong.

5.4 Drivers of wine choice by Chinese consumers

When no manipulations were performed, wine quality ratings from fellow wine buyers (peer review) were the most important drivers of consumer choice, higher than country of origin and price (RQ4). Store rating was in the top three most important attributes for Chinese consumers in all the conditions, even more important than expert ratings. Looking at Chinese wine sales websites such as yesmywine.com, store rating represents the scores given by other buyers, verifying the importance Chinese consumers give to the opinion of their peers. It is not surprising that the number one driver of purchase intention is a personal recommendation, as this reflects Chinese being relatively new-to-wine consumers and potentially lacking confidence in their choices, relying on some kind of reinforcement. In addition, with an unknown brand, any cues that give guidance regarding quality would be expected to be important. Scores provide certification, some safety, decreasing the risk associated with the purchase of an unknown brand or label of wine. This conclusion is comparable to a previous choice study with Australian consumers, where ratings were the most important attribute in a simulated bottle shelf experiment (Lockshin et al., 2010). Nevertheless, store rating preference could also be related to the higher score displayed for the store rating (99 points) than the expert (96 points).

Country of origin was found to be more important than price in Stage 1, as previously described by Balestrini and Gamble (2006) who found COO information to be a more important quality cue than price for Chinese consumers. Interestingly, price became the most important attribute in the repeated experiment (Stage 2), where price importance increased for all conditions, including the control. Differences between Stage 1 and Stage 2 could be attributed partially to the memory decay effect of the articles, but also to consumers becoming somewhat more familiar with the brand and labels, and the visual shelf simulation choice experiment. Other possible reasons are that respondents’ real wine
buying behaviour in the period between tests had a close influence to their wine choice task, which was not controlled in this experiment. Low inter-test reliability will be further discussed in the next session.

The Stage 2 condition is arguably more related to the real world, when consumers would most likely have seen the labels before buying and been exposed to competing messages after first exposure. Low to mid prices were preferred in both stages, which is a pattern previously observed in different markets (Lockshin et al., 2009, Lockshin et al., 2010), including China (Osidacz et al., 2011). However, the market share of lower price points increased and that for higher price points decreased in Stage 2. The effect of familiarity could be playing an important role here. When consumers are unfamiliar with a product, they will look for cues such as higher price to indicate quality, and decrease the purchase risk. Once familiar with the labels and having purchased before, consumers are more comfortable in choosing lower prices, since quality is now known or at least accepted.

As expected, France was the preferred country choice for the Control group, when no manipulations were performed, and Australia and Italy were almost at parity, which is similar to that found in Williamson et al. (2012). A possible disadvantage of the online method would be the reliance on respondents to notice manipulated elements such as closure type or medals, which might have been missed by the consumers on a simulated wine shelf in this experiment. Label type was also not very important, with modern styles the least appealing. When testing designed labels with consumers, Lockshin et al. (2009) also found a relatively low importance of label styles compared to other attributes like price and brand popularity. Other studies also showed relatively small importance of the attractiveness of the front label in both developing and developed markets (Lockshin and Corsi, 2012). Whilst the presence of medals was reasonably obvious on the bottle, medals had a negligible importance on choice in this experiment. Tang et al. (2015) also found low importance of medals for Hong Kong consumers. However, store ratings were important as they reflect consumer and expert opinions as noted above. Grape and label type were also of low importance, although slightly more
influential for the control group. While grape variety was slightly more influential at Stage 1, label design importance somewhat increased in Stage 2.

5.5 Test-retest reliability of discrete choice experiments

This set of discrete choice experiments had low test-retest reliability. The impact of the attributes price, expert rating, label and buyer review on wine choice changed significantly between Stages 1 and 2 for the group who read the control article and was not exposed to any advertorial. Particularly the impact of price increased strongly in the second experimental stage. Research on order effects within choice experiments also observed that price becomes more important over the course of the experiment (Johnson and Orme, 1996, Meißner and Decker, 2010), but an increase by a factor of two has not been previously reported.

Several potential reasons for the observed preference change can be listed. Wine is a product new to the Chinese market that most consumers consume rather infrequently. Although respondents were recruited based on having consumed imported red wine at least once per month, they might not yet have stable preferences for a variety of different imported wines as included in this choice experiment. It is likely that consumers reflected on their experimental choices after Stage 1 and compared it to their actual subsequent wine purchase behaviour. We therefore assume that choices in Stage 2 more validly reflect their true wine preferences. A second potential reason relates to response styles that differ across cultures and nationalities (Baumgartner and Steenkamp, 2001). Particular collectivistic cultures like China are more likely to show acquiescence bias (Diamantopoulos et al., 2006, Si and Cullen, 1998) and to accept given choice alternatives to keep face. For instance in a choice experiment for different meat varieties, a very large share of Chinese respondents were found to randomly choose without indicating that they would not accept any of the provided alternatives (Grunert et al., 2015). It could be suspected that this demand bias reduces with repeated exposure to the experiment, explaining the higher share of “none”-choices in Stage 2.
The results suggest that researchers should be very careful when interpreting one-off choice experiments for new to the market products in emerging markets, especially those with a higher likelihood of social desirability bias (e.g. China). Future research should aim at validating stated preferences from choice experiments in China with revealed preferences from observed market data (Mueller et al., 2010c).

6 Conclusion

This report represents first quantitative evaluation of the effect of one single advertorial exposure on consumer choice in the short and medium term. This study shows that discrete choice experiments allow the evaluation of the effect of different messages under conditions simulating real world behaviour, which provides a highly useful approach to test messages for persuasive influence. The experimental approach combined an initial test with a follow-up evaluation some days later and provides a promising means for understanding the medium term effect of an intervention on the resulting consumer behaviour. The method is not without some uncertainties as noted above in the discussion. Further research will be necessary to understand whether the differences between the two control group results are merely random noise or a systematic response to new information at Stage 1 followed by a re-interpretation of the same information in Stage 2. Nonetheless, the importance of country was fairly stable and was certainly influenced in the experimental conditions.

The results demonstrate that advertorial communication can have a significant effect on future purchase behaviour, and that telling a story about what makes a particular country different from others is an effective way to improve choice of that country’s wine. The research also highlighted that some stories and positioning statements are more powerful than others. These could be useful insights for developing successful wine marketing campaigns in China, but also for any relatively high involvement product type in specific markets. The method provides a relatively inexpensive testing approach for positioning statements and for identifying messages which would have the strongest
medium-term effect. This is a superior approach to merely asking consumers about their preferred positioning statement.

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澳大利亚葡萄酒
世界上最风味最佳的葡萄美酒

近的一个调查显示中国消费者最喜欢澳大利亚葡萄酒的风味，偏好程度高于来至法国以及其它国家的葡萄酒。在此次调查中，几百名中国葡萄酒消费者盲品了来自世界主要产国的葡萄酒，并对所品尝的葡萄酒进行排名。澳大利亚葡萄酒在调查中表现优异、成绩突出，一举跃居榜首。

澳大利亚酿酒师紧跟市场动态，并根据消费者的喜好利用现代化的工艺技术酿造出迎合消费者口感偏好的葡萄酒。澳大利亚葡萄酒清晰易懂，更容易为中国消费者接受。澳大利亚引领着酿造高品质葡萄酒的潮流，竭力为全球广大消费者酿造美酒佳酿。
Figure 3

The graph illustrates the market share (%) at different price points for Stage 1 and Stage 2. The data points are marked with blue (Stage 1) and red (Stage 2) circles. The y-axis represents the market share, while the x-axis shows the price in RMB. The graph shows a trend where Stage 1 and Stage 2 have varying market shares at different price points, with Stage 1 generally having a higher market share than Stage 2 at most price levels.