Wine and website loyalty: 
A model of sales promotion and service attributes

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Abstract:

**Purpose** - This paper examines the relationship between feelings toward buying wine on mobile phones and m-commerce website loyalty by examining a) the mediating role of sales promotion and b) the moderating role of service attributes of the m-commerce websites.

**Design/methodology/approach** - The study comprised a questionnaire among 2754 responses from six countries (France, Germany, Greece, South Africa, United States and Canada). Non-probability criterion-based purposive sampling was used, screening for legal drinking age and ownership of a smartphone.

**Findings** - Results show that sales promotion mediates the relationship between feelings towards buying wine on mobile phones and m-commerce website loyalty

**Practical implications** - Wine producers and retailers should consider the use of sales promotion to enhance sales and loyalty to m-commerce websites.

Keywords: M-commerce, wine, loyalty, affective states
1. INTRODUCTION

With more than 139 million results produced by Google when the words "purchase" and "wine" are searched together, it is clear there is enormous competition for wine producers or retailers on the Internet. According to eMarketer (2015), total retail sales are growing slowly but steadily in the US. Although e-commerce is growing more quickly than offline sales, e-commerce is expected to rise only slightly as a share of the total, from 7.2% this year to 9.8% by 2019. Mobile e-commerce is an even smaller proportion, accounting for a tiny 1.6% of all retail, and by 2019, its share is projected to be only 2.7% of the total. Understanding consumers’ perceptions of mobile commerce and the factors that might positively and negatively affect these perceptions is thus important for wine marketers.

The subject of the mobile interface connecting the user to an online store (e.g. smartphones or tablets), remains an important subject that has not been adequately addressed. Usage growth of mobile devices, specifically of smartphones is favouring the surge in mobile shopping (Lenhart et al., 2011). Lee et al. (2015) propose that factors such as mobile phone simplicity and interactivity are enhancing the user experience, leading to positive perceptions about using a mobile phone for m-commerce. Some recent research has focused on the adoption, acceptance and use of m-commerce; the utilitarian and hedonic factors that might influence it (Li et al., 2012); and its customer satisfaction (Choi et al., 2008; Trevinal & Stenger, 2014). Lee et al. (2015) also examined customers’ positive involvement as a precursor to website loyalty where distrust mediates customer perceptions of various web features in the process of building customer loyalty.

This paper examines the relationship between feelings toward buying wine on mobile phones and loyalty toward the wine producer/retailers’ m-commerce websites. Specifically, the study proposes that sales promotion mediates the relationship between feelings toward buying wine on mobile phones and loyalty toward m-commerce websites and that the indirect effect of sales promotion is dependent on service attributes of the wine producer/retailer’s m-commerce website. The study is organised as follows. First we conceptualise online sales promotion, service delivery attributes of m-commerce websites, the affective state of buying wine on mobile phones and m-commerce website loyalty. We then develop the theoretical model and hypotheses. The moderated-mediation model is then tested using 2754 responses from six countries. Finally, results and analysis are interpreted and discussed, then the theoretical contribution and practical implications of the study are discussed.

2. DEVELOPMENT OF THE THEORETICAL FRAMEWORK

This section starts with a discussion of the key constructs being investigated i.e. online sales promotion, feelings towards buying wine on mobile phones, m-commerce website loyalty and service attributes on websites, and then develops the theoretical model.
ONLINE SALES PROMOTION

Online wine sales currently represent less than 5% of total wine sales in developed countries (Higgins et al., 2014), although growth in online sales is expected. In a study across numerous industries the most frequently used online advertising methods were email ads, social media and webpages (Leeflang et al., 2014). Of the various promotional tools, online ads have been found to have a significant positive effect on sales (Peng et al., 2014). In the US wine industry specifically, Thach et al. (2014) found that online newsletters, social media, and electronic word-of-mouth were the most important online sales promotions. Online sales promotion offers practical advantages (temporal and spatial), financial advantages (through comparing prices), and hedonic ways of consuming (Eroglu et al., 2001). Thus, positive feelings towards buying wine via mobile phones could be stronger when there sales promotion is present on the sellers’ website.

FEELINGS TOWARD MOBILE-WINE PURCHASING

When people are feeling positive, they tend to have more favourable expectations for the future (Masters & Wyndol, 1976). We expect that if consumers have positive feelings about buying wine using mobile then they are more likely to make purchases from a wine firm or seller’s website. This is consistent with Wu et al.’s (2008) study suggesting that emotions are a significant predictor of purchase intention.

M-COMMERCE WEBSITE LOYALTY

Previous research has suggested that customer loyalty should be the consequence of perceived value, customer satisfaction, trust and habit (Lin & Wang, 2006). Online loyalty or e-loyalty has been defined as a consumer’s intention to buy from a website or to visit it again (Cyr et al., 2006; Flavián et al., 2006; Yoon et al., 2008). Buying intentions therefore, provide a measure of attitudinal loyalty, defined as the level of customer’s psychological attachment, willingness to recommend the service provider and engage in positive word-of-mouth (WOM) communications (Kaur & Soch, 2013). It follows then that satisfied customers who are members of a wine group or have liked a wine fan page, for example, would be willing to engage in WOM communications. This type of loyalty includes a degree of dispositional commitment associated with repeat purchase behaviour (Chaudhuri & Holbrook, 2001).

Service attributes of wine website

In our conceptualisation, we have taken into account that wine is heavy, fragile and difficult to deliver, requiring special care from transporting companies. It is important for e-commerce orders to attain on-time delivery to maintain customer trust and satisfaction (Pelet et al. 2015). Bressolles & Durrieu (2011) suggest that the main components of e-service quality are information, ease of use, and the design, reliability and security of the website. Consistent with these components, we conceptualise that the service delivery attributes of a wine e-
commerce website include follow-up communication, on-time delivery, tracking service and low delivery charges.

We developed a moderated mediation model that examines sales promotion as the mediating mechanism and service attributes of the website as a moderating variable with regards to the effect of feelings toward mobile wine buying on m-commerce website loyalty. The three most commonly used measures of emotions are: pleasure, arousal and dominance (PAD) (Sørensen, 2008; Koufaris, 2002), which are normally related to the environmental stimuli component in m-commerce (Kaikkonen, 2012). We have drawn on Mehrabian and Russell’s (1974) PAD theory to substantiate our moderated mediated model of wine purchase via mobile phones and websites and to develop our hypotheses.

*Figure 1: Research Model*

<table>
<thead>
<tr>
<th>W</th>
<th>M_i</th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>= Feelings towards buying wine on mobile phone</td>
<td>Mobile website loyalty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mi = Sales Promotion</td>
<td>W = Service (wine delivery) attributes of the website</td>
</tr>
</tbody>
</table>

Based on the theoretical model and suggestions from relevant literature we state that:

**H1:** Sales promotional efforts do not mediate the relationship between feelings towards buying wine via mobile phone and m-commerce website loyalty

**H2:** Online service (wine delivery) attributes of the website do not moderate the strength of the mediated relationship between feelings towards buying wine on mobile phones and m-commerce websites via marketing and promotional efforts.

3. **RESEARCH METHOD**

3.1. **Sample and Data collection**

This research involved 2,754 respondents from six countries (France, Germany, Greece, South Africa, United States and Canada). Data was collected using both personal and online questionnaires. Non-probability, criterion-based purposive sampling was used because it allowed the researchers to intentionally select participants who have experience with the central phenomenon being explored (Hair *et al*. 2009). In this study the central phenomenon under investigation is experience with wine websites. The sample was initially screened for legal drinking age and ownership of a smartphone for online access. The recruitment criteria included whether participants were members of a wine club or liked a fan page dedicated to wine. The sample included a large number of students as they are active Internet and mobile users, comprising 42.7% of total participants.
3.2. **Survey Instrument**

To measure the feelings with regards to buying wine using a mobile phone, we adapted Mehrabian and Russell’s (1974) PAD scale. Participants responded to items assessing their feelings, using bi-polar items with anchors including harmful/beneficial, unpleasant/pleasant, bad/good, worthless/valuable, and unenjoyable/enjoyable on a five-point semantic differential scale, where 1 represented “negative feelings” and 5 “positive feelings”. We used the PAD scale due to its continual high reliability (Valdez & Mehrabian, 1994).

Researches have indicated different intentions to revisit the website. The first one is how usability defines the promptness of how the system could be used (Davis, 1989), and how user friendly, easily navigated and organized it is (Parasuraman et al., 2005). In our conceptualisation, m-commerce website loyalty is the extent to which an m-commerce website provides the required information, perceived usefulness, ease of use and the extent to which a visitor has the behavioral tendency to regularly visit it. This construct is measured with four items using a 5-point Likert type scale, where 1 refers to “strongly disagree” and 5 to “strongly agree”. The construct contains items: I know which website I should visit to get the information I need; I am loyal to a particular website; I can find my favorite website address without much effort; I can immediately recognise my favorite website address if it is presented among other addresses.

The service attributes of an m-commerce website are defined as the extent to which such attributes encourage buying wine on a mobile phone. We asked respondents to rate items on a Likert-type scale where 1 denotes “very unimportant” and 5 denotes “very important”. The construct is measured with four items: on-time delivery; quality of the wine; tracking your online purchase and low delivery charges. The assumption is that on-time delivery and quality of wine influences consumers’ feelings towards buying wine via mobile phones and enhances m-commerce website loyalty. The assumption is that quality of wine and on-time delivery influence website revisits while being able to track orders online assures consumers and builds confidence in the transaction exchange. Yoon (2002) found that both trust and satisfaction positively influenced website revisits. We asked participants to rate the importance of online sales promotion when buying wine through mobile phones, measured on a 5-point scale where 1 denotes “unimportant” and 5 denotes “important”.

To examine the mediating role of sales promotion in the relationship between consumers’ feelings toward buying wine on mobile phones and m-commerce website loyalty, we propose that sales promotion efforts do not mediate the relationship between positive feelings towards buying wine on mobile and loyalty to a m-commerce website. The assumption is that online service (wine delivery) attributes of the website do not moderate the strength of the mediated relationship between positive feelings towards buying wine on mobile phone and m-commerce websites loyalty via marketing and promotional efforts.

In our study, m-commerce website loyalty is a major dependent variable. The independent variable consisted of consumer feelings toward buying wine using mobile phones. Service (wine delivery) attributes and sales promotional efforts entered the model as mediating and moderating variables respectively. We deemed it necessary to control for wine expertise and drinking habits on the hypothesised relationship (moderated mediation).
3.3. Scale Validation

Using Preacher et al.’s (2007) procedure, we report a moderated mediation test of our model that used survey data collected from 2754 responses from six countries. The most commonly used test for internal consistency is Cronbach’s alpha (Cronbach, 1951) and values for the independent and mediating and moderating factors ranged between .69 and .89. Rossiter (2002) suggests the importance of expert judgement for the face validity of the research instrument. Accordingly, twelve experts from marketing and information science fields critically evaluated all the items in the research instrument to assess content validity, representativeness, dimensionality, comprehensibility and unambiguity.

To analyse unidimensionality, exploratory factor analysis (EFA) was employed using SPSS, version 20. This was followed by confirmatory factor analyses (CFA) for validation of the measurement model. All of the fit indices (RMR = 0.03, GFI = .99, AGFI = .98, NFI = .98, TLI = .98, CFI = .99 RMSEA = 0.03) were in the acceptable range as suggested by Bentler (1992). In addition, we found all the individual factor loadings to be highly significant, giving support for convergent validity (Gerbing & Anderson, 1988). We calculated the Cronbach alpha coefficient, composite factor reliability, and average variance extracted for each of the scales and the values were in the desirable range except for online service (wine delivery) attributes, which fell below the cut-off criteria. We made the decision to retain service (wine delivery) attributes for mobile wine purchase in our analysis on theoretical grounds. We also tested for alternate models and found the original models to be better than all the constrained models. Table 1 shows that our measures have the required construct validity.

Table 2: Results of construct validity

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>SMOB</th>
<th>FMOB</th>
<th>MKT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMOB</td>
<td>0.70</td>
<td>0.35</td>
<td>0.17</td>
<td>0.10</td>
<td>0.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMOB</td>
<td>0.90</td>
<td>0.63</td>
<td>0.04</td>
<td>0.03</td>
<td>0.19</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>MKT</td>
<td>0.60</td>
<td>0.47</td>
<td>0.17</td>
<td>0.10</td>
<td>0.41</td>
<td>0.18</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Note: *Factor correlations and discriminant validity (square root of average variance extracted displayed on the diagonal).

SMOB = Service attributes for buying wine on mobile phone
FMOB = Feelings towards buying wine on mobile phone
MKT = Marketing efforts
CR = Composite Reliability
AVE = Average Variance Extracted
MSV = Maximum Shared Variance
ASV = Average Shared Variance
4. RESULTS AND DISCUSSION

We used hierarchical multiple regressions to test Hypothesis 1 and hierarchical moderated regression to test Hypothesis 2. In all analyses we entered the control variables of wine expertise and drinking habit. All variance-inflation factors in our regression were below 2; and none of the bivariate correlations had high coefficients, suggesting that multicollinearity is not an issue in our analysis.

After controlling for wine expertise and drinking habits, we found that feelings towards buying wine on mobile and online sales promotion were positively related ($\beta = .17, p<.001$) and feelings towards buying wine on mobile and website loyalty were significant ($\beta = .03, p<.05$). The mediating factor online sales promotion and website loyalty were negatively related ($\beta = -.06, p<.001$). The results show that the direct effect of feelings towards buying wine on mobile phone and loyalty towards m-commerce website in the presence of online sales promotion was not significant ($\beta = -.03, S.E. = .01, p >.05$).

Positive feelings toward buying wine on mobile phones and m-commerce websites are mediated via online sales promotion (H1). This relationship is stronger indirectly (FMOB) $\rightarrow$ online sales promotion (PROM) $\rightarrow$ m-commerce website loyalty (LOY) ($\beta = -.01, S.E. = .03$, Boot LLCI = -.02, Boot ULCI = -.01). Absence of zero between Boot LLCI (Boot Lower Level Confidence Interval) and Boot ULCI (Boot Upper Level Confidence Interval) supports our hypothesis (H1). We followed Preacher et al. (2007) to establish moderation when testing Hypothesis 2. After controlling for wine expertise and drinking habits, feelings toward buying wine on mobile phones and website loyalty were significant and positively related ($\beta = .03, S.E. = .01, p<.05$) and the mediating factor online sales promotion and website loyalty was negatively related ($\beta = -.06, S.E. .01, p <.001$). The moderating variable online service (wine delivery) attributes and website loyalty were significant and positively related ($\beta = .15, S.E = .02, p <.001$). The interaction term for feelings towards buying wine on mobile phone with online service (wine delivery) attributes ($\beta = .09, S.E = .02, p <.001$) were significant in predicting website loyalty.

Moderated mediation was assessed following Preacher et al. (2007) to determine whether the strength of the mediation differs across the levels of the moderator in predicting the effect of feelings towards buying wine on mobile phones and website loyalty. Moderated mediation is demonstrated when the conditional direct effect of feelings towards buying wine on mobile phones and on website loyalty via sales promotion differs in strength across the values of the moderator (wine delivery service attributes). We operationalized high and low levels of online service attributes as one standard deviation above and below the mean score. Table 2 presents the estimates, standard errors, and significance value of the conditional direct effect of independent on dependent variable at values of the moderator.
Table 2: Moderated mediation result for sales promotion and online (wine delivery) service

<table>
<thead>
<tr>
<th>Moderator</th>
<th>Level</th>
<th>Conditional direct effect</th>
<th>SE</th>
<th>Sig</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online service (wine delivery) attributes</td>
<td>-.84</td>
<td>-.05</td>
<td>.02</td>
<td>.03</td>
<td>-.09</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td>.00</td>
<td>.03</td>
<td>.02</td>
<td>.05</td>
<td>.00</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>.84</td>
<td>.11</td>
<td>.02</td>
<td>.00</td>
<td>.07</td>
<td>.15</td>
</tr>
</tbody>
</table>

Results show that online service (wine delivery) attributes moderated the mediation of online sales promotion between the positive feelings towards buying wine on mobile phone and m-commerce websites loyalty (H2)

Additional observations

- The effect of feelings towards buying wine on mobile phones and m-commerce website loyalty is stronger when buyers receive higher levels of service from m-commerce websites (See Table 1).
- Results show that for online service (wine delivery) attributes, the conditional direct effects were at higher values of the moderator ($\beta = .11$, S.E = .02, $p < .001$) than at the mean score ($\beta = .03$, S.E = .02, $p=.05$). Taken together, results verify our observation that there was a moderated mediation.

7. CONCLUSIONS

This paper examines a) the mediating role of sales promotion in the relationship between feelings towards buying wine through mobile phones and m-commerce websites and b) the moderating role of service attributes of m-commerce websites in influencing the mediation. We did not found support for null hypothesis and accepted alternative hypothesis. That is, sales promotional efforts mediate the relationship between positive feelings towards buying wine via mobile phone and m-commerce website loyalty. The online service (wine delivery) attributes of the website moderate the strength of the mediated relationship between positive feelings towards buying wine on mobile phone and m-commerce websites loyalty via marketing and promotional efforts. Our additional finding sheds further light into these relationships, for example, positive feelings towards mobile wine buying and loyalty towards m-commerce websites are related with higher levels of online sales promotion. Results show that for online service (wine delivery) attributes, the conditional direct effects were at higher values of the moderator than at the mean score. Taken together, results verify our observation that there was a moderated mediation (See Table 2). This suggests that mobile wine purchasing is effective when wine sellers include sales promotion on their m-commerce websites and that service attributes seem to moderate the likelihood of repeat purchase. The growing use of radio technology systems such as Beacon should provide wine sellers with “push marketing” techniques in order to make customers aware of the availability of their
wine in the local area. Push marketing, including mobile email, SMS, in-app and other push notifications, has the potential to reach customers with messages whenever and wherever they are, enabling further growth of m-commerce (Pelet, 2013). Location-based or time-sensitive offers coupled with opt-in alerts can be a winning combination to boost conversion and engagement (Pelet, 2014), especially at the happy-hour time.

Despite the development of new technologies that may make the mobile experience even more convenient, wine delivery and associated services such as storing the wine in a proper place with the right temperature, hygrometry and luminosity conditions, because wine like it cool, dark and moist, can become of paramount for customers. These professional cellar conditions proposed by websites should be the priority for the wine marketer's strategy devoting his energy for m-commerce purposes. Traditional distribution, supply-chain management and its optimization should still be priorities for wine competitors, whether they are e-retailers, m-retailers, or even traditional retailers.

Our research was encompassed six countries and as a result, our findings are limited to these counters. Future research could include other countries with growing wine consumption such as China and Russia. Further, this examination was restricted to understanding feelings towards mobile wine buying and mobile website loyalty. Future research is recommended to examine attitudes towards wine purchasing behaviours, such as between m-wine purchasers vs. non-purchasers and different age groups.

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