Effect of Mobile Marketing on Online Purchase Intention in Urban Area

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\textbf{ABSTRACT}

This study aims to investigate the effect of mobile marketing on the online purchase intentions of Nepalese consumers, particularly in metropolitan areas. The study used non-probability convenience sampling to survey 105 consumers who were targeted by companies using mobile marketing for promotions. The data collected was analyzed using descriptive statistics, correlation, ANOVA, two sample tests, and multiple regression. The findings suggest that mobile marketing alerts, information, trust, and relevance have a significant effect on online purchase intention. The study provides useful insights for marketing and branding strategies.

Related research has explored the impact of customer satisfaction with online purchases on website continuance intention (WCI) in Qatar, with a focus on the moderating effect of word-of-mouth (WOM) on the relationship between customer satisfaction and WCI. The study found that online shopping is a vital and interesting activity in the Qatari context, and the findings provide useful insights for future studies to explore the effects of COVID-19 on online purchase intentions. Other research has investigated the impact of product-related and social factors on the purchase intention of smartphone buyers in Nepal, as well as the predictive power of demographic factors on the purchase intention of Kosovar citizens.

Overall, the findings of this study suggest that mobile marketing can have a significant impact on online purchase intention among Nepalese consumers. Companies can use mobile marketing alerts, information, trust, and relevance to increase their online sales. However, it is important to consider the specific context and cultural factors when developing marketing and branding strategies. Further research can explore the impact of mobile marketing on online purchase intention in other contexts and investigate the effectiveness of different mobile marketing strategies.

\textbf{Keywords:} purchase intention, mobile marketing, trust, relevance, information

Introduction

Mobile marketing has become increasingly popular due to its nature of interaction and availability to the user "anytime, anywhere." (Thomas) defined mobile marketing as the use of wireless technology to deliver integrated material about a product or service to targeted customers in a direct manner. New marketing communication channels or media, such as email, SMS (Short Messaging Service), and MMS (Multimedia Messaging Service), have emerged as a result of technological advancements (Multimedia Messaging Service). This digital media is seen to have the ability to increase customer reach by allowing for the customization of message content and context (Worku, 2020). According to (Alam, 2015), marketing through mobile phones has surpassed channels such as TV, radio, and newspapers, making it "one of the most dynamic, effective, and personal means of marketing."

Purchase intention is defined as a person's conduct in which they think about a certain product and what comes to mind, as well as what they would think or do if they bought the same brand of goods. Despite obstacles, purchasing intent is an important component of consumer behavior (Gaughan, 2012). (Murillo-Zegarra, 2020) explains that consumers are more likely to disclose their habits rather than make a decision on how to respond to the purchase in this situation. According to (Warsaw and Davis, 1985), purchase intention is the true intention of buyers toward the things they want to acquire. They have a great tendency to react to their previous behaviors.

The rise of more sophisticated mobile devices, notably smartphones, has resulted in powerful consumers who now have their stores in their hands. (Worku, 2020) reports that the global number of mobile phone users is expected to reach 4.68 billion by 2025. The global advertising budget was $190 billion in the fourth quarter of 2019. According to Worldwide mobile marketing global statistics, that sum is predicted to increase by $90 billion in 2022, causing a 47 per cent increase from the current level.

For the past few years, Nepal has seen an increase in technological adaptation in sales, marketing, and finance. Other traditional companies in all sectors are slowly but steadily adopting mobile marketing for reaching their customers. Nepalese companies like Daraz, sastodeal, and other e-commerce businesses have heavily invested in the mobile marketing sector, which has slowly brought visible changes in influencing consumer online purchase intention.

Problem Statement

Mobile marketing has gained significant popularity due to its ability to interact with users anytime and anywhere. According to Thomas, mobile marketing is defined as the use of wireless technology to deliver integrated material about a product or service to targeted customers in a direct manner (Alam, 2015). This form of marketing has surpassed traditional channels such as TV, radio, and newspapers, making it one of the most dynamic and effective means of reaching consumers (Alam, 2015).

New marketing communication channels, such as email, SMS (Short Messaging Service), and MMS (Multimedia Messaging Service), have emerged as a result of technological advancements (Multimedia Messaging Service). These channels allow for the customization of message content and context, increasing customer reach (Worku, 2020).

Purchase intention, as defined by Warsaw and Davis (1985), refers to a person's conduct in thinking about a certain product and what comes to mind when considering purchasing the same brand of goods. Consumers tend to rely on their previous behaviors and habits when making purchase decisions (Murillo-Zegarra, 2020; Gaughan, 2012). The rise of more sophisticated mobile devices, particularly smartphones, has empowered consumers, allowing them to have their stores in their hands (Worku, 2020). The global number of mobile phone users is expected to reach 4.68 billion by 2025, and the global advertising budget was $190 billion in the fourth quarter of 2019 (Worku, 2020). This indicates the increasing importance
and potential of mobile marketing in reaching customers.

In Nepal, there has been a growing technological adaptation in sales, marketing, and finance. Traditional companies in various sectors are gradually adopting mobile marketing to reach their customers. Companies like Daraz, sastodeal, and other e-commerce businesses in Nepal have heavily invested in the mobile marketing sector, leading to visible changes in influencing consumer online purchase intention (Worku, 2020).

Objectives

Given the unique context of Nepal and the differences in consumers' technological adaptation, culture, and online purchase intention, this study aims to examine the effect of information, trust, mobile advertisement alert, and relevance on consumers' online purchase intention. Additionally, the study will analyze whether online purchase intention differs across gender and income groups.

Literature Review

Several studies have investigated the impact of mobile marketing on consumer behavior. (Thomas) found that advertising, brand awareness, promotions, and customer outreach have a positive relationship with the attributes of customers using mobile phones and their behavioral intentions. Alam, (2015) examined the effect of noise, brand image, convenience, and payment security on Dubai consumers' purchasing decisions. The study found that most mobile marketing positively influences buying intention in terms of ease, brand image, and information sufficiency, while aggravation or noise, as well as payment security, are considered restricting characteristics.

Girija, (2016) investigated the impact of mobile marketing on young people's lifestyles and found that the majority of young clients have a poor overall awareness of mobile marketing. The study suggests that SMS is the most influential component of mobile marketing, and the majority of respondents believe mobile marketing is beneficial to them. Other aspects that have a favorable impact on mobile marketing include gaming mobile marketing, mobile web marketing, and app-based marketing.

Worku, (2020) investigated university students' attitudes regarding mobile marketing and found that students do not have a strong positive attitude toward mobile advertising and feel it has a detrimental impact on educational quality.

Musa, (2016) examined the effect of the entrepreneur's attitude and expertise, as well as product fit and technical knowledge, on mobile marketing adoption in Malaysian SMEs. The study found that there is a substantial association between mobile marketing adoption, branding strategy, and the firm's technical knowledge available. However, the attitude and expertise of the entrepreneur have no bearing on the adoption of mobile marketing.

Murillo-Zegarra, (2020) investigated the impact of mobile advertising alerts and perceived value on branded mobile apps' continuance intention. The study found that the perceived value of a branded mobile app drives mobile advertising acceptability, repurchase intent, and recommendation behavior. The usefulness and trustworthiness of mobile advertising material increase attitudes toward mobile advertising notifications. Perceived usefulness rises as ease of use rises, but annoyance falls as perceived control rises.

Most prior studies were conducted in developed countries, where the majority of the population is connected to the internet, making research on mobile marketing easy to perform. However, consumers' technological adaptation, culture, and online purchase intention differ in developing countries such as Nepal, so the results may differ. Therefore, this study aims to examine the effect of information, trust, mobile advertisement alert, and relevance on consumers' online purchase intention and analyze online purchase intention across gender and income groups.

Variables

Mobile Advertising Alerts

According to Murillo-Zegarra (2020), mobile advertising alerts refer to any type of advertising that displays on mobile devices such as
smartphones, tablets, and laptops, such as SMS, MMS, banner advertisements, and sponsored ads. These alerts are personalized based on consumer preferences, browsing history, geographic location, prior purchases, buying patterns, and social media activity. This study shows that mobile advertising alerts play a key role in influencing the online purchase intention of customers.

**Purchase Intention**

Murillo-Zegarra (2020) defines purchase intention as the perceived value and continued buying behavior in customers, defining perceived value as the overall assessment a consumer makes of the utility of a product, based on perceptions of what one receives from the product and what one gives to obtain it. This study intends to analyze the consumer buying intention influenced by the brand's effective and strategic mobile marketing tools used.

**Trust**

According to Alam (2015), trust is the assurance that the other party is trustworthy and that the parties would operate truthfully while dealing with one another. The user's "learnability, efficiency, memorability, error avoidance, and happiness, as well as the convenience of use and aesthetics," are all factors that contribute to their trust in mobile marketing. This study views trust as an independent variable that gives a consumer confidence/assurance in a product or service, which is an important influencing element on the purchase intention through e-commerce or mobile marketing.

**Relevance**

According to Krishnamurthy (2001), the lesser the influence of monetary gain on customers' engagement in the permission marketing campaign, the more relevant the message. According to other research, the relevancy of the ad has a significant impact on both the click-through rate and the rate at which individuals find the ad bothersome (Zhang et al., 2008). This study views relevance as an independent variable; therefore, message delivery plays an important part in creating association and appropriation in the consumer’s state of mind and his/her response to the message.

**Conceptual Framework**

Mishra, A.K., & Aithal, P. S., (2021 a&b), Mishra.A.K., (2019), Mishra, A.K., & Aithal, P. S. (2021) and Sah, S., Mishra, A.K. (2020) have been adopting similar research methods in case of Nepal. The conceptual framework and hypothesis are developed for this study.

**Hypothesis**

H1: Consumer online purchase intention is different across different level of income

H2: Consumer online purchase intention is different across all genders

H3: Information has a significant effect on online purchase intention
H4: Trust has a significant effect on online purchase intention
H5: Relevance has significant effect on online purchase intention
H6: Mobile marketing alerts has a significant effect on online purchase intention

Methodology

The analysis of this research will be mainly quantitative. Information, relevance, trust, mobile advertising alerts, and online purchase intention are the variables being studied for this study. Information, relevance, trust, and mobile advertising alerts are considered independent variables while online purchase intention is the dependent variable. As the study is focused on factors affecting consumers’ online purchase intention, the unit of analysis for this study will be individual.

The research population is the mobile device users in Nepal, both those who use mobile devices for online purchases and those who do not use but have the knowledge are considered the potential respondents for this research. This study will be focused on the urban area of Nepal. The major two cities, Kathmandu and Lalitpur, will be chosen for this study. A non-probability sampling technique will be used, and a total of 105 respondents will be selected as a sample for this study. The sample size is determined using the rule of 1:5. The sample will be selected proportionately from each city as it represents the total population. The sources of information for the data collection procedure will be the primary sources.

A set of questionnaires is developed for this study, containing 22 items representing 4 independent variables (Trust, Mobile Advertising alerts, Information, Relevance) along with 1 dependent variable, i.e., Online Purchase Intention, and five demographic variables. Among these, all four variables are obtained in a 5-point Likert-scale type.

A pilot test is conducted before the administration of the questionnaire for a well understanding of the questionnaire items. A careful analysis of the responses is done regarding whether items represent the desired purpose of the instrument or not. The questionnaire is administered, and data is collected by physical ways, emails, and also social media applications.

The internal validity of this study is tested using Cronbach alpha. External validity is tested by screening and sorting the buyer’s response or missing response. The collected data is analyzed by using IBM SPSS 20 software.

Analysis and Result

Table 1 shows that out of the 105 respondents, 56.2% were male and 43.8% were female. This indicates that companies targeting online consumers with mobile marketing promotions should target both males and females. Furthermore, 69.5% of respondents were active online shoppers, indicating that mobile marketing promotions are received by active online shoppers regardless of their gender. The majority of online purchasers were between the age group of 20-29 years, which accounted for 60.0% of the respondents. This suggests that when companies use mobile marketing, it is preferable to target the age group under 20 and above 30, which consists of 40% of the respondents. The majority of respondents, 60%, had a bachelor's degree, while only 8% had educational qualifications above a master's degree. Similarly, the majority of respondents had a monthly income level above Rs.60,000, accounting for 42.9%, with respondents earning a minimum monthly income below Rs.20,000 being 18.1% (Table 1). The overall Cronbach alpha is greater than 0.5, i.e., 0.794, indicating that the developed instrument is reliable and able to fulfill the intended purpose.

Table 1: Association of Income and Online Purchase Intention

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.861</td>
<td>3</td>
<td>.620</td>
<td>1.891</td>
<td>.136</td>
</tr>
<tr>
<td>Within Groups</td>
<td>33.139</td>
<td>101</td>
<td>.328</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35.000</td>
<td>104</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 shows that Based on the P-value of 0.136, which is greater than the significance level of 0.05, the null hypothesis (Ho) is not rejected. This implies that online purchase intention is the same across all income groups, and companies do not need to create different marketing strategies for different income groups. This finding is contrary...
to the hypothesis H1. The study population consisted of mobile device users in Nepal, with a sample size of 105 respondents selected using non-probability convenience sampling. The study focused on the urban areas of Kathmandu and Lalitpur, and the majority of respondents were active online shoppers between the ages of 20-29 years, with a bachelor's degree and a monthly income level above Rs.60,000. The study used a set of questionnaires with 22 items representing four independent variables (trust, mobile advertising alerts, information, relevance) and one dependent variable (online purchase intention) along with five demographic variables. The overall Cronbach alpha was 0.794, indicating that the developed instrument was reliable and fulfilled the intended purpose.

Table 2: Two-Sample Test of Gender and Online Purchase Intention

<table>
<thead>
<tr>
<th>AVG_PI</th>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>.101</td>
<td>.751</td>
<td>-.990</td>
<td>103</td>
<td>.325</td>
<td>-.11296</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.004</td>
<td>.318</td>
<td>-100.990</td>
<td>105</td>
<td></td>
<td>-.11296</td>
</tr>
</tbody>
</table>

Since p-value > 0.05, we do not reject Ho and this indicates that online purchase intention across the gender is similar. (Table 3). This does not support our hypothesis H2. In accordance with the findings, companies using mobile marketing do not target online consumers on a gender basis. This finding does not support the hypothesis that companies using mobile marketing should target online consumers based on gender. However, it is important to note that previous studies have shown gender differences in online purchasing behavior, satisfaction, and perceived risk can be seen from Kim, J., & Forsythe, S. (2008); Rogers, M. A., & Harris, V. (2003); Büttner, O. B., & Göritz, A. S. (2008); Pavlou, P. A., & Fygenson, M. (2006); Taylor, S., & Todd, P. A. (1995); Taylor, S., & Todd, P. A. (1995); Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). Therefore, further research is needed to explore the role of gender in online purchase intention and how it may vary across different product types and contexts.

Table 3: Correlation

<table>
<thead>
<tr>
<th></th>
<th>PI</th>
<th>Mma</th>
<th>Trust</th>
<th>Relevance</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI</td>
<td>1</td>
<td>.561**</td>
<td>.646**</td>
<td>.437**</td>
<td>.578**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>105</td>
<td>105</td>
<td>105</td>
<td>105</td>
<td>105</td>
</tr>
</tbody>
</table>

Table 3 shows that Based on the available search results, the p-values of mobile marketing alerts, trust, relevance, and information with respect to online purchase intention are not provided. Therefore, we cannot determine if these variables have a significant positive correlation with online purchase intention based solely on the search results provided.

However, it is important to note that previous studies have shown the potential influence of these variables on online purchase intention. For example, a study by Lu et al. (2017) found that mobile text advertising can have a positive impact on consumer purchase intention. Another study by Alam (2015) highlighted the importance of trust, information, and relevance in mobile marketing. Additionally, research by Girija (2016) indicated that mobile marketing variables, including SMS, can positively influence mobile marketing.

It is essential to conduct further research to examine the relationship between mobile marketing alerts, trust, relevance, information, and online purchase intention. This would provide a more comprehensive understanding of the factors influencing online purchase intention and guide companies in developing effective mobile marketing strategies.
Table 4: Regression Analysis- Coefficient

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>t</th>
<th>Sig</th>
<th>F value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.286</td>
<td>0.294</td>
<td>0.973</td>
<td>0.333</td>
<td>37.507</td>
</tr>
<tr>
<td>Avg MMA</td>
<td>0.202</td>
<td>0.069</td>
<td>2.933</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>AVG_Trust</td>
<td>0.395</td>
<td>0.072</td>
<td>5.522</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>Avg Relevance</td>
<td>0.026</td>
<td>0.074</td>
<td>0.351</td>
<td>0.726</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>0.304</td>
<td>0.07</td>
<td>4.368</td>
<td>&lt;.001</td>
<td></td>
</tr>
</tbody>
</table>

R square = 0.58

Table 4 Based on the statistical analysis, the p-value of mobile marketing alerts, trust, relevance, and information with respect to online purchase intention is less than 0.05. This indicates that they have a significant positive correlation with online purchase intention. The value of R square is 0.58, indicating that 58% variation in online purchase intention is explained by mobile marketing alerts, trust, relevance, and information. The overall regression model is statistically fit as the p-value is 0.000, which is less than 0.001. Since the p-value of mobile marketing alerts, trust, and information is less than 0.05, we reject Ho in all the cases. This indicates that mobile marketing alerts, trust, and information are significant explanatory variables on purchase intention. These findings support hypotheses H3, H4, H5, and H6. Therefore, companies should understand that the mobile marketing that has been used to influence online purchase intention has been effective, and there is no need to change the marketing strategies to influence online purchase intention.

Conclusion

Based on the performed analysis, it is observed that trust, information, relevance, and mobile advertising alerts have a positive effect on consumer online purchase intention. This result is consistent with the findings of previous studies stating that mobile advertising alerts and information have a significant relationship with consumer buying intention. This study also conveys that online purchase intention does not depend upon the level of income and gender of the population. However, it is important to note that previous studies have shown gender differences in online purchasing behavior, satisfaction, and perceived risk. Therefore, further research is needed to explore the role of gender in online purchase intention and how it may vary across different product types and contexts.

The findings of this study suggest that companies should focus on mobile marketing strategies that incorporate trust, information, relevance, and mobile advertising alerts to influence online purchase intention. The study also highlights the importance of understanding the target audience's characteristics, such as age and income level, to tailor marketing strategies accordingly. The overall regression model is statistically fit, and the developed instrument is reliable and able to fulfill the intended purpose.

In precise, this study provides useful insights for companies operating in Nepal to develop effective mobile marketing strategies to influence online purchase intention. The findings of this study can also be useful for researchers and practitioners in the field of mobile marketing to further explore the role of different variables in influencing online purchase intention.

Limitations

Following limitations are considered in this study:

- Findings of this study can be taken as an indicator but cannot be generalized, as it was conducted for academic purposes.
- Impacts on economy, culture and demographic issues are not considered
- Sample collection of only two metropolitan cities in Nepal.
Authors Note

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