

Establishing the Mathematical Relationship of Online Shopping and the Existing Hailing Transport System in Olongapo City Using Binary Logit Model

Geoffrey CUETO^a, Vince Dominic CUEVAS^b, Rome Lauren JAVIER^c, Vince Louis SUMERA^d

^{a,b,c,d}School of Civil, Environmental, and Geological Engineering, Mapúa University, 658 Muralla St, Intramuros, Manila, 1002 Metro Manila

^aE-mail: glcueto@mapua.edu.ph,

^bE-mail: vdjcuevas@mymail.mapua.edu.ph

^cE-mail: rljavier@mymail.mapua.edu.ph

^dE-mail: vlmsumera@mymail.mapua.edu.ph

ABSTRACT. Olongapo City, home to nearly 300,000 Filipinos, comprises 17 barangays with diverse demographics and terrain, influencing its internal delivery systems. The rise of online shopping, particularly during the pandemic, has become a prevailing trend in the city due to its efficiency. Hailing Systems like Lalamove, Foodpanda, Lazada, Shopee, and others have found significance in this 103.3 square-kilometer municipality with varying topographies. Within the municipal framework, Transportation and Hailing Systems have been strategically integrated to meet the needs of local consumers. The appropriateness of hailing systems to the community's needs and their integration into city plans is carefully considered, with a focus on evaluating the impacts for optimal municipal planning. This study assessed the characterization people who uses Online Shopping in Olongapo City by analyzing the data under different predictors. The research observed consumer choices in using online shopping, addressing the preferences of Olongapeños over traditional shopping methods. Through this investigation, the study provided insights into the predictors that affects the decision of the people of Olongapo City to use online shopping.

KEYWORDS: Online Shopping, Hailing System, Internal Delivery System, Predictors

1. INTRODUCTION

Olongapo City is home to almost 300,000 Filipinos; the small city located in Zambales comprises 17 barangays with different demographics and terrain specifications that contribute to the delivery system within the town itself. Online shopping is a trend in the city because of its efficiency and effectiveness in bringing goods within reach, especially during the Pandemic season.

The municipality spans around 103.3 square kilometers, has different topographies, and is a good landmark for using Hailing Systems, such as Lalamove, Foodpanda, Lazada, Shoppe, and many more. Inside a Municipality, Transportation and Hailing Systems are incorporated to accommodate the needs of all consumers and buyers inside a locality. The system is well-planned and coordinated to ensure the best effectiveness it would give its residents. Papers such as Ecological Profiles, Land Use Plans, Zoning codes, and many more dictate how effective systems incorporated in a city would be. The plans to be implemented should fit in with the lifestyle and overall aesthetic of the city. Hailing systems should also be appropriate to the needs of the people; usage of these systems is also looked into in the plans to be incorporated. These impacts should be assessed to attain a plan that is best suitable for the municipality.

This study aims to thoroughly depict the profile of online shoppers in Olongapo City by examining various aspects such as demographics, shopping behaviors, and preferences. Simultaneously, the research seeks to categorize the diverse range of 10 online business platforms operating in the city, including e-commerce websites, social media shops, and other virtual marketplaces. Additionally, an exhaustive list of available hailing transport services, including ride-sharing and traditional taxis, will be compiled. The study also aims to establish a meaningful connection between online shoppers and influencing factors, shedding light on the determinants that shape their online purchasing decisions. Furthermore, it will explore respondents' inclination to invest in an improved online shopping experience, offering insights into the perceived value and preferences of the online consumer base in Olongapo City. By adopting a comprehensive approach that considers both consumer characteristics and the digital marketplace, this research aims to provide valuable and unique insights into the dynamics of online commerce in Olongapo City.

1.1 Background of the Study

This study aims to profile online shoppers in Olongapo City by analyzing demographics, shopping behaviors, and preferences while also categorizing various online business platforms and hailing services in the area. By exploring the factors that influence purchasing decisions and the potential for improved online shopping experiences, the research seeks to provide valuable insights into the dynamics of e-commerce in Olongapo City.

1.2 Statement of the Problem

The main purpose of the study is to establish the relationship between online shopping behaviors and the utilization of the existing hailing transport system in Olongapo City using a Binary Logit Model.

Specifically, the study seeks to answer the following:

1. To characterize the online shoppers present in Olongapo City.
2. To determine the existing types of businesses, particularly online business platforms, in Olongapo City.

3. To evaluate the frequency of online shopping among residents of Olongapo City.
4. To establish the relationship between online shopping behaviors and the existing hailing transport system in Olongapo City.

1.3 Objectives

The objective of this thesis is to establish a mathematical relationship between online shopping behaviors and the utilization of the existing hailing transport system in Olongapo City using a Binary Logit Model. Specifically, the study aims to:

1. Characterize the online shoppers in Olongapo City.
2. Determine the existing types of online business platforms in Olongapo City.
3. Enumerate the different types of hailing transport services available in Olongapo City.
4. Establish the relationship between online shopping behaviors and the utilization of hailing transport services.
5. Assess respondents' willingness to pay for an improved online shopping experience.

1.4 Significance of the Study

The study is significant to the City of Olongapo as it shows the Online Shopping behavior of the residents and be able to distinguish what predictors people usually considers when engaging in Online Shopping.

The study can give an insight to potential businesses who were planning to extend their market in Olongapo City to be aware of the current condition and the shopping behavior of the residents. Businesses will have the opportunity to generate more and help the economy of Olongapo City to improve drastically. By understanding the behaviors of the people, existing local businesses can also open up online websites that will reach more people and more market that can open up income. They will also be more aware of how influential the online marketing and hailing system after the Pandemic. The majority of people learned to shop online during the epidemic but carried on even after the lockdown.

The study would be ideal because it describes the characterization of Online Shoppers present within the transportation systems of Olongapo, it would dictate the actions to be put into because it unveils the present condition of Online Shopping in Olongapo City. The gathered data is a good basis on how important and effective creating a plan that would improve Online Shopping experience present in Olongapo City.

1.5 Scope and Limitations

The study was conducted within the vicinity of Olongapo City only, other rural properties such as the SBMA, Bataan and Zambales were not included within the study and its correlation within the area of Olongapo City. The study assessed all of the 17-barangay included within the area, transactions within the area of NCR and other regions were included in this study. The study also included Hailing systems such as Foodpanda, Lalamove, Maxim, Shopee and Lazada. The data gathered in the beginning of the

study were only be within the past 10 years of the municipality record. Datum past within the range were not included since delivery systems are not popular at that time frame.

2. METHODOLOGY

This research paper utilised exploratory research to understand the characteristics of an Online Shopper in Olongapo City, Philippines. Exploratory research is a method that seeks to examine an issue or subject in order to acquire fresh knowledge, comprehend its fundamental elements, and formulate hypotheses, typically without any predetermined expectations or results. The data was gathered by using surveys and questionnaires across the 17 barangays of the municipality from different demographics such as its age, sex, income, marital status and present disability. The data was used in order to analyse aspects such as Online Shopper Satisfactory, Frequency of Traditional and Online Shopping, Online Shoppers willingness to pay and Correlation of Factors. The study intended to analyse the characteristics of an Online Shopper in Olongapo City and their respective predictors in order to attain an excellent online shopping experience using Exploratory Data Analysis and Binary Logit Equations.

2.1 Methodological Framework

The researchers designed a visual representation of an elaborate phases conducted to produce and finish the objectives of the research study. The research focused on the local municipality of Olongapo City, which is one of the Highly Urbanized Cities (HUC) in the country. The methodological framework issued a step-by-step approach during the study.

To put the research into work, the researchers met with the local government officials of Olongapo City to gather information about the hailing system condition in the area. After attaining the insights of the public officials, then formulated the research survey and disseminated it across the 17 barangays of the city. After collecting the data, the researchers then analyzed the details and made the final conclusions and recommendations for the study.

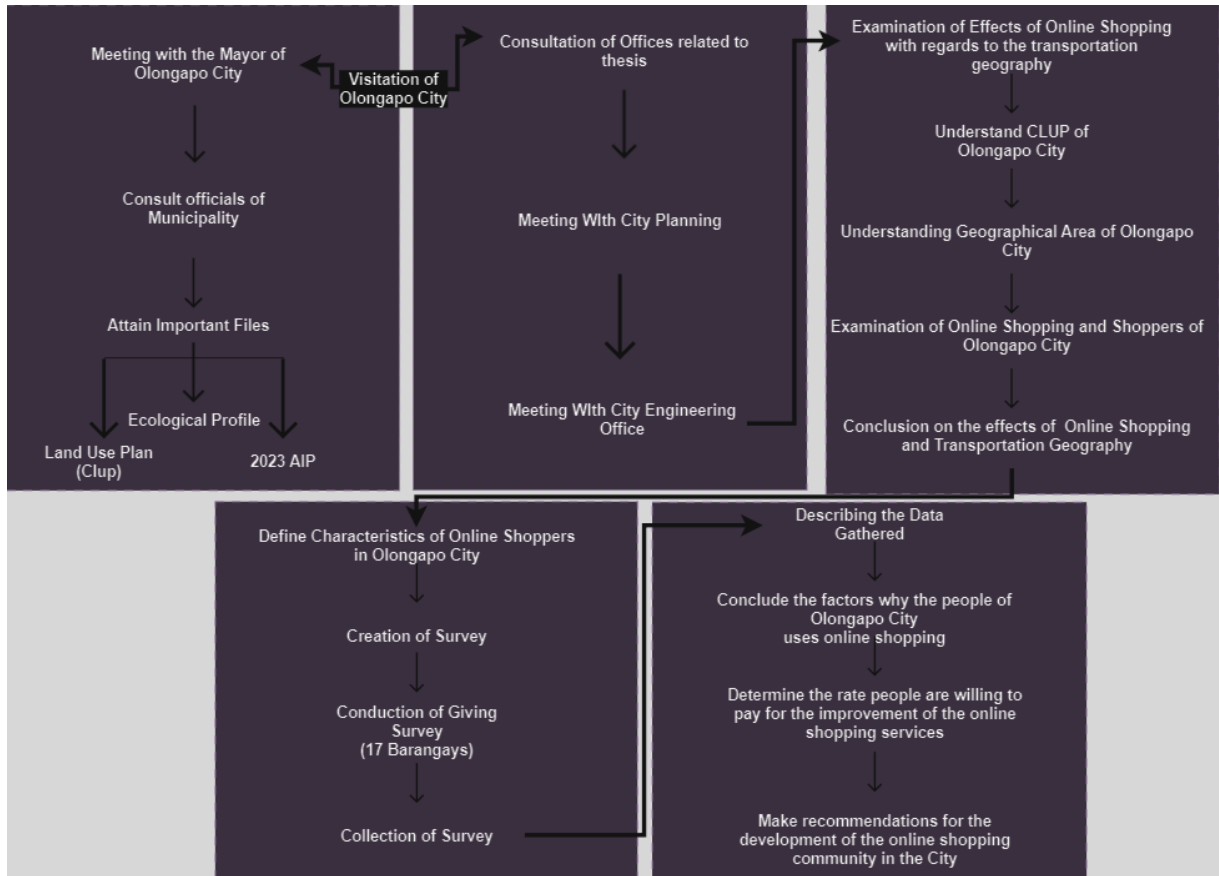


Figure 1. Methodological Framework

2.2 Research Design

The research used Exploratory Data Analysis (EDA) in reaching the conclusion for the thesis. The study explores a new trend in Olongapo City which is the rise of Online Shoppers and improvement of their experience. The study utilized interviews, surveys in order to attain the data needed for the analysis of the study.

2.3 Research Setting

The research was conducted in Olongapo City, Philippines, encompassing a comprehensive study delivered across all 17 barangays within the municipality. The study strategically covered diverse demographics, ensuring representation across various segments of the city's population to obtain a holistic understanding of online shopping patterns and preferences. The research was conducted in Olongapo City, Philippines, encompassing a comprehensive study delivered across all 17 barangays within the municipality. The study strategically covered diverse demographics, ensuring representation across various segments of the city's population to obtain a holistic understanding of online shopping patterns and preferences.

2.4 Respondents of the Study

The study's participants encompass a diverse group of Olongapo City residents actively utilizing online shopping services across a variety of platforms. The respondents were intentionally distributed among different demographic variables, ensuring representation across various factors such as gender, age, income levels, marital status, and disability status. This approach aims to capture a comprehensive understanding of the online shopping behaviors and preferences within the city's population, considering the influence of these diverse demographic factors on consumer choices and experiences.

2.5 Data Gathering Instruments

The researchers used data gathering instruments such as surveys and interviews. The gathering of data was gathered from the collected answers of the respondents regarding their experience and characteristics as an Online Shopper of Olongapo City. It contained the critical pieces of information from the people of Olongapo City that were needed for the research that determined the demographics of the people, as well as the predictors in relation to their online shopping.

2.6 Modelling Procedures

The researchers utilized Microsoft Excel and Python Programming Language in order to analyse the gathered data from the surveys and interviews conducted. Python was used to correlate the predictors present, distribution of the frequency of traditional and online shopper and lastly the confusion matrix and ROC-AUC of online shoppers.

2.7 Statistical Treatment Instruments

The researchers employed an Exploratory Research Design, opting for a Binary Logit Model to analyze the data. The model's parameters were estimated and interpreted using the Python Programming Language, showcasing its versatility in statistical modelling and data analysis.

In Logistic Regression, it is assumed that the logits represent a linear combination of the predictor variables.

$$L = \log \left(\frac{P(Y = 1)}{1 - P(Y = 1)} \right) = \beta_0 + \sum_{i=1}^n \beta_i X_i$$

Binary Logic Regression Forecasts the likelihood of an observation belonging to one of two categories of a binary dependent variable, considering one or more independent variables, which may be either continuous or categorical in nature.

3. RESULTS AND DISCUSSION

The researchers adopted the Likert scale in the survey, a widely used tool to measure attitudes, perspectives, and perceptions. The purpose of this scale is to convert qualitative data into a quantitative format, facilitating statistical analysis and enabling researchers to identify patterns, trends, and relationships. The well-balanced structure of the system helps reduce bias, resulting in more accurate and reliable data collection and

making it easier to compare different research. In the initial phase of the poll, participants classified themselves into several categories. 41.94% of the respondents were male and 58.06% were female. Most participants in the study fell between the age range of 22 to 35. The smallest number of participants are under 16 years old or between the ages of 51 and 60. These two age groups combined make up just 6.45% of the total population. The bulk of respondents are either married (38.71%) or single (41.93%), while the remaining respondents are widowed or separated. The prevalence of disabilities among the responders was 6.45%. Regarding money, 29.03% of the participants earn a monthly salary ranging from Php 20,001 to Php 25,000. Additionally, 6.45% of the respondents fall into two other income brackets: Php 10,001 to Php 15,000, and Php 30,000 and above.

Figure 3.1 Online Shoppers Demographics

<i>Sex</i>	
<i>M</i>	41.94%
<i>F</i>	58.06%
<i>Age</i>	
<i>< 16</i>	6.45%
<i>16-21</i>	29.03%
<i>22-35</i>	35.48%
<i>36-50</i>	12.90%
<i>51-60</i>	6.45%
<i>> 60</i>	9.67%
<i>Marital Status</i>	
<i>Single</i>	41.93%
<i>Separated</i>	9.67%
<i>Married</i>	38.71%
<i>Widowed</i>	9.67%

Disability

<i>Yes</i>	<i>6.45%</i>
<i>No</i>	<i>93.55%</i>

Average Monthly Personal Income

<i>< 10,000</i>	<i>22.58%</i>
<i>10,001 – 15,000</i>	<i>6.45%</i>
<i>15,001 – 20,000</i>	<i>16.13%</i>
<i>20,001 – 25,000</i>	<i>29.03%</i>
<i>25,001 – 30,000</i>	<i>19.35%</i>
<i>>30,000</i>	<i>6.45%</i>

3.1 Relative Importance Index

The Relative Importance Index (RII) is a statistical instrument utilized to prioritize and rank items according to their perceived significance in the research. The RII value quantifies the relative significance of a factor concerning other factors. After calculating the RII values, the factors are ranked in descending order, with the highest RII signifying the item of greatest importance. This strategy offers a systematic and quantitative approach to comprehending the variables a group considers most crucial, enabling researchers to concentrate on the most significant regions. This metric is beneficial in particular because it provides a consistent and simple method for assessing the relative importance of each component. The application of RII promotes evidence-based decisionmaking and improves the clarity of research findings. The relative importance index RII is a statistical tool used to determine the ranking of different predictors in a study or survey (Hossen et al. 2015).

The result using Relative Importance Index should always be between 0 and 1 and can be computed using the formula:

$$RII = \frac{\sum_{i=1}^6 Wi}{A * N}$$

Where *RII* = Relative Importance Index

Wi = Weighted Mean

A = Highest weight

N = total number of respondents

Relative Importance Index

Predictors	1	2	3	4	5	6	Weighted Total	RII	Ranking
Reliability	18	6	15	21	21	12	336	0.602	4
Convenience	24	24	18	9	3	15	267	0.478	5
Affordability	9	9	6	33	30	6	363	0.651	2
Security	21	33	15	9	9	6	249	0.446	6
Efficiency	15	9	15	18	18	18	348	0.624	3
Effectiveness	3	12	24	6	12	36	399	0.715	1

Table 1. Relative Importance Index

The primary focus for those engaged in online shopping is the efficiency of the experience. According to the perceptions of online shoppers, effectiveness is the critical factor shaping the decision to opt for online shopping. This underscores the importance individuals attach to successfully acquiring the desired products. Conversely, security emerges as the least prioritized consideration, signifying that most individuals do not emphasize the sources of their purchased or ordered items.

3.2 Binary Logistic Regression

The binary logistic regression equation gathered from Python summarises the acceptable combination of predictors in order to cater the Online Shoppers of the Municipality. Predictors such as Affordability, Efficiency and Effectiveness support positively on how to satisfy the Online shoppers. On the other hand, predictors such as Reliability, Convenience and Security suggest a negative coefficient for consideration to the satisfaction of an online shopper.

$$B = 0.83099534 + -0.3923408 * X_Reliability + -1.07207384 * X_Convenience + 0.97789856 * X_Affordability + -2.38338401 * X_Security + 0.33907489 * X_Efficiency + 2.76004876 * X_Effectiveness$$

3.3 EDA Data Presentation using Phyton

Correlation of Established Predictors

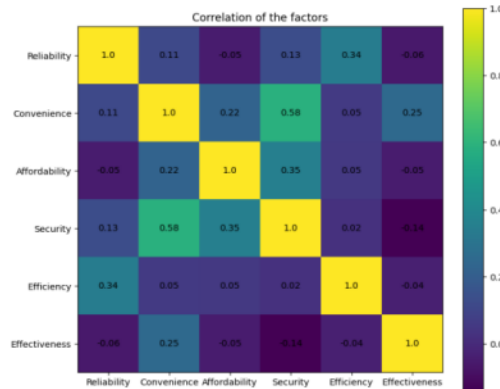


Figure 2. Correlation of the Factors

The visual representation above illustrates the established correlations among various predictors. The most notable correlation identified is between Security and Convenience, attaining a score of 0.58. These findings indicate a strong association between Security and Convenience, suggesting that Olongapo Online Shoppers prioritize both the Security of their Packages and the Convenience of the service. Conversely, the least correlated factors are Reliability and Effectiveness, exhibiting a minimal correlation of -0.06. This implies that individuals do not commonly consider the relationship between Effectiveness and Reliability when making decisions about online shopping.

Frequency Distribution of Traditional Shoppers

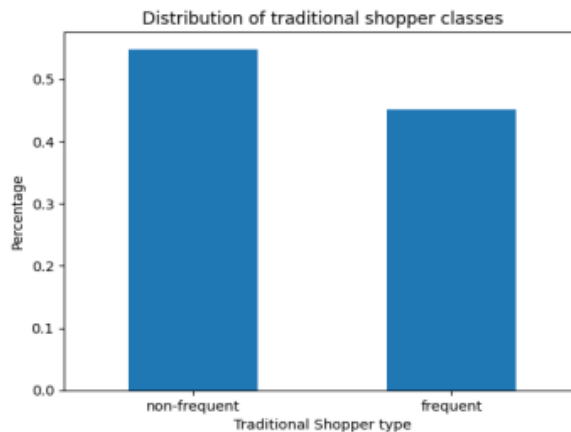


Figure 3. Distribution of Traditional Shoppers

The figure above shows the distribution of traditional shoppers in Olongapo City, it shows that 54.84% are non-frequent traditional shoppers meanwhile 46.16% of them frequently use traditional shopping as their mode of shopping.

Frequency Distribution of Online Shoppers



Figure 4. Distribution of Online Shoppers

The table above shows the frequency distribution between online shoppers in the municipality. 67.7% of the respondents can be considered as non-frequent online shopper in which they only order 3 times in a week, meanwhile 33.3% of the respondents consider themselves as frequent users of online shopping.

Confusion Matrix for Online Shopper

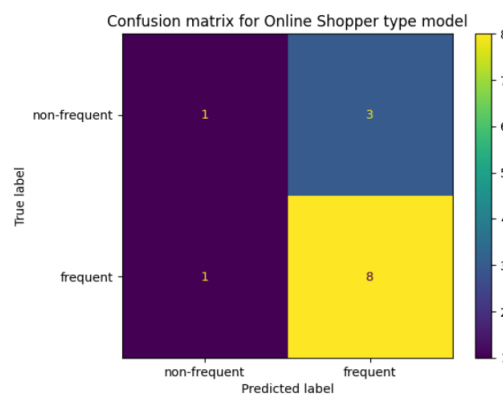


Figure 5. Confusion Matrix for Online Shopper

The presented matrix reveals that, among 13 respondents who frequently engage in online shopping, the model correctly identified 8 instances of this behavioral shift, resulting in an accuracy rate of 61.54%.

Confusion matrix becomes pivotal in assessing the reliability and applicability of the model for the specific domain under investigation.

The Confusion Matrix above is a key factor on the creation of the ROC Curve for Online Shoppers, the ROC curve gave a result of 51.27%, it depicts that the model is slightly better on predicting correctly. Since the study itself is exploratory in nature, the focus is frequently on getting insights into data distribution, investigating correlations between variables, and developing early knowledge.

AUC-ROC Curve for Online Shoppers

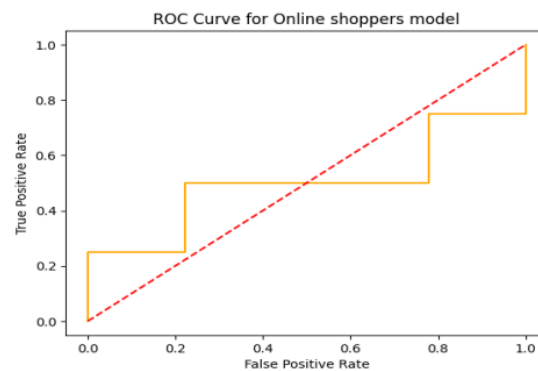


Figure 6. Curve for Online Shoppers

4. CONCLUSION AND RECOMMENDATION

4.1 Conclusion

Analyzing online shoppers in Olongapo City and understanding their interaction with online shopping services is vital for enhancing business strategies, inventory, and services. This research aims to enhance the overall experience of online shoppers and intends to provide a better understanding of the Willingness to Pay (WTP) of Olongapo City online shoppers to receive packages in the best possible way. The study examined the demographics of Online Shoppers of Olongapo City into the following aspects:

- Females are more inclined to engage in online shopping compared to male shoppers.
- Individuals between the ages of 16 to 35 are more likely to participate in online shopping.
- Online shoppers with an average monthly personal income of Php 20,001 to 25,000 are most likely to engage in online shopping.
- Olongapo Online shoppers prefer to shop online on applications, rather than online marketplaces, social media, and websites.
- Foodpanda is the most used hailing transport service in Olongapo City.

The survey conducted a thorough evaluation of online buyers' satisfaction levels, taking into account important factors including efficiency, price, safety, convenience, and dependability. The results showed that a sizable majority reported contentment with the aspects of price, safety, convenience, and

dependability. While a tiny percentage of respondents expressed displeasure, it was notable that online consumers expressed high levels of satisfaction, particularly with regard to the effectiveness of the service.

Additionally, online shoppers of Olongapo City will allow an average additional fee of Php 30 and above to have a better experience in factors such as its convenience, efficiency, and environment. In contrast, respondents prioritized the safety and security of its delivery with only an average allotment of Php 20 to 25. A majority of people (45%) are willing to pay Php 25.00 and above, demonstrating a strong preference for improvements in both convenience and efficiency. This underscores the significant value placed on enhancing these aspects of the online shopping experience by a substantial portion of the respondents.

The conducted Relative Importance Index with respect to the considered predictors, online shoppers prioritize the efficiency of their experience, particularly valuing the effectiveness in obtaining desired products. Interestingly, security is the least emphasized consideration, suggesting limited concern about the sources of purchased items. The distribution of traditional shoppers in Olongapo City is depicted by the data collected, and it reveals that 46.16% regularly choose traditional shopping, while 54.84% only shop traditionally occasionally. According to the municipality, 33.3% of respondents consider themselves frequent online shoppers, while 67.7% of respondents are classed as non-frequent online shoppers, placing orders only three times a week.

The matrix shows that among 13 frequent online shoppers, the model accurately identified 8 instances, yielding a 61.54% accuracy rate. The Confusion Matrix is crucial for assessing the model's reliability in the specific domain. The ROC Curve resulted in a 51.27% accuracy, indicating a slight improvement in predictive capability. Given the exploratory nature of the study, emphasis is placed on gaining insights into data distribution, exploring variable correlations, and developing early knowledge.

Online shopping platforms in the locality should consider implementing a fare increase in the range of Php 25 or more, with the commitment to enhance their services in terms of convenience, safety and security, affordability, and efficiency. Prioritizing the effectiveness of their service is paramount, given its status as the most crucial aspect among all. The local government of Olongapo City should collaborate with businesses providing online services to facilitate a smooth transition regarding the increased delivery fees. Additionally, Olongapo City should explore the utilization of three-wheeled vehicles for online business deliveries, issuing permits for such vehicles to handle online orders and inquiries.

The local government should spearhead the initiative of Scheduled Delivery Windows, allowing customers to select delivery time slots for their online inquiries. This approach aims to evenly distribute deliveries throughout the day, mitigating the impact of peak-hour delivery rushes on local traffic congestion.

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APPENDICES

Survey

OLONGAPO CITY	ONLINE SHOPPING	CUEVAS, JAVIER, SUMERA
ONLINE SHOPPERS' PROFILE		
<p>1. Sex <i>Kasarian</i>: <input type="checkbox"/> Male <input type="checkbox"/> Female</p> <p>2. Age <i>Edad</i>: <input type="checkbox"/> Below 16 <input type="checkbox"/> 16-21 <input type="checkbox"/> 22-35 <input type="checkbox"/> 36-50 <input type="checkbox"/> 51-60 <input type="checkbox"/> Above</p> <p>3. Marital Status: <input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Separated <input type="checkbox"/> Widowed</p> <p>4. Address: _____</p> <p>5. Occupation <i>Trabaho</i>: _____</p>	<p>6. Do you have a disability? <i>Meron ka bang kapansanan?</i> <input type="checkbox"/> Yes <i>Meron</i> _____ <input type="checkbox"/> None <i>Wala</i></p> <p>7. Average Monthly Personal Income <i>Buwanang Kita</i>: <input type="checkbox"/> Below ₱ 10,000 <input type="checkbox"/> From P 20,001 to P 25,000 <input type="checkbox"/> From ₱ 10,001 to ₱ 15,000 <input type="checkbox"/> From P 25, 001 to P 30,000 <input type="checkbox"/> From ₱ 15,001 to ₱ 20,000 <input type="checkbox"/> Above P 30,000</p>	
ONLINE SHOPPERS' PATTERN		
<p>8. How many times do you do traditional shopping? <i>Gaano ka kadalas aktwal na mamili sa tindahan?</i> _____ (Weekly)</p> <p>9. Are you aware of any online shopping service in the city? <i>May alam ka bang online shopping service sa syudad?</i> <input type="checkbox"/> Yes <i>Oo</i> <input type="checkbox"/> No <i>Hindi</i></p> <p>10. If yes, what shopping services are you aware? <i>Kung oo, ano-ano ang mga ito?</i> (SELECT ONLY ONE)</p> <p><input type="checkbox"/> Grab <input type="checkbox"/> FoodPanda <input type="checkbox"/> Shopee <input type="checkbox"/> Lazada <input type="checkbox"/> Maxim <input type="checkbox"/> Move-it <input type="checkbox"/> JNT <input type="checkbox"/> Ninja van <input type="checkbox"/> Others: _____</p> <p>11. How many times do you shop online? <i>Gaano ka kadalas umorder online?</i> _____</p> <p>12. How do you shop online? <i>Paano ka umoorder online?</i> <input type="checkbox"/> Online Marketplaces <input type="checkbox"/> Social Media <input type="checkbox"/> Websites <input type="checkbox"/> Applications <input type="checkbox"/> Others <i>Iba pa</i>: (Please specify)</p>	<p>14. What is/are your primary reason/s for using online shopping? <i>Ano ang iyong mga rason sa paggamit ng online shopping service?</i></p> <p><input type="checkbox"/> Reliability <i>Maaasahan</i> <input type="checkbox"/> Convenience <i>Kaginhawahan</i> <input type="checkbox"/> Affordability <i>Abot-kaya</i> <input type="checkbox"/> Security <i>Seguridad</i> <input type="checkbox"/> Efficiency <i>Kahusayan</i> <input type="checkbox"/> Effectiveness <i>Bisa</i> <input type="checkbox"/> Others <i>Iba pa</i>: (Please specify) _____</p>	

13. Referring to Question No. 12, How long does it take for your order to be delivered in your destination? Gaano katagal bago mo makuha ang iyong inorder na produkto?
 _____ (in days)/(araw)

ONLINE SHOPPERS' SATISFACTION

15. Based on your experience, please rate the following items:

Base sa iyong karanasan ng online shopping, bigyan ng antas ang bawat aspeto mula 1 bilang pinakamababa hanggang 4 bilang pinakamataas

	1 Very Dissatisfied Sobrang Hindi Kontento	2 Dissatisfied Hindi Kontento	3 Satisfied Kuntento	4 Very Satisfied Sobrang Kuntento
I. Reliability <i>Maaasahan</i>				
a. Customer's wait time <i>Paghihintay</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The completeness of the product <i>Kumpleto ang produkto</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Always available <i>Laging Meron</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Flexibility in route <i>Pwede dumaan kahit saan</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II. Convenience <i>Kaginhawaan</i>				
a. Smooth Delivery <i>Walang abala</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cleanliness <i>Kalinisan</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1 Very Dissatisfied Sobrang Hindi Kontento	2 Dissatisfied Hindi Kontento	3 Satisfied Kuntento	4 Very Satisfied Sobrang Kuntento
III. Safety and Security <i>Kaligtasan at Seguridad</i>				
a. Product safety <i>Kaligtasan ng produkto</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Product security <i>Seguridad sa byahe ng produkto</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV. Affordability <i>Abot-kaya</i>				

a. Value for money in terms of fee <i>Presyo ng pamasaha</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V. Effectiveness and Efficiency <i>Kahusayan at Bisa</i>				
a. Quality of Service <i>Kalidad ng Serbisyo</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>16. In order to improve the performance of online shopping services in terms of comfort and convenience aspect, how much are you willing to add to the current fee? <i>Para sa pagbabago at pagpapaunlad ng mga online shopping services base sa aspeto ng kaginhawaan, hanggang magkano ang kaya mong idagdag na bayad?</i> (Check one <i>Pumili ng isa</i>) <input type="checkbox"/> Same Fee <input type="checkbox"/> PhP 10-15 <input type="checkbox"/> PhP 15-20 <input type="checkbox"/> PhP 20-25 <input type="checkbox"/> PhP 25 above</p>				
<p>17. In order to improve the performance of online shopping services in terms of safety and security aspect, how much are you willing to add to the current fee? <i>Para sa pagbabago at pagpapaunlad ng mga online shopping services base sa aspeto ng kaligtasan and seguridad, hanggang magkano ang kaya mong idagdag na bayad?</i> (Check one <i>Pumili ng isa</i>) <input type="checkbox"/> Same Fee <input type="checkbox"/> PhP 10-15 <input type="checkbox"/> PhP 15-20 <input type="checkbox"/> PhP 20-25 <input type="checkbox"/> PhP 25 above</p>				
<p>18. In order to improve the performance of online shopping services in terms of affordability aspect, how much are you willing to add to the current fee? <i>Para sa pagbabago at pagpapaunlad ng mga online shopping services base sa aspeto ng abot-kaya, hanggang magkano ang kaya mong idagdag na bayad?</i> (Check one <i>Pumili ng isa</i>) <input type="checkbox"/> Same Fee <input type="checkbox"/> PhP 10-15 <input type="checkbox"/> PhP 15-20 <input type="checkbox"/> PhP 20-25 <input type="checkbox"/> PhP 25 above</p>				
<p>19. In order to improve the performance of online shopping services in terms of environment and health friendliness aspect, how much are you willing to add to the current fee? <i>Para sa pagbabago at pagpapaunlad ng mga online shopping services base sa aspeto ng makakalikasan and maayos para sa kalusugan, hanggang magkano ang kaya mong idagdag sa pamasaha?</i> (Check one <i>Pumili ng isa</i>) <input type="checkbox"/> Same Fee <input type="checkbox"/> PhP 10-15 <input type="checkbox"/> PhP 15-20 <input type="checkbox"/> PhP 20-25 <input type="checkbox"/> PhP 25 above</p>				
<p>20. Based on your online shopping experience, please rank the most important factor that will make you shift from Traditional Shopping to Online Shopping (From 1 to 5, where 5 is the most important to you and 1 is least important to you) <i>Base sa paggamit ng online shopping, bigyan ng antas ang bawat aspeto mula 5 bilang pinakamataas hanggang 1 bilang pinakamababa na makakapagpakumbinsi sayo na lumipat mula sa Traditional Shopping patungo sa Online Shopping .</i></p> <p>___ Reliability <i>Maaasahan</i> ___ Convenience <i>Kaginhawahan</i> ___ Affordability <i>Abot-kaya</i> ___ Security <i>Seguridad</i> ___ Efficiency <i>Kahusayan</i> ___ Effectiveness <i>Bisa</i></p>				
<p>21. Other Comments and Suggestions for Online Shopping Improvement: <i>Ano pa ang iyong komento at mungkahi upang mapabuti at maisaayos pa ang iyong karanasan sa Online shopping?</i></p> <hr/>				