

# Factors Affecting the Efficiency of Online Food Deliveries: A Comparative Analysis among GrabFood, Foodpanda, and Zomato Ph

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## Abstract

Nowadays society uses online food deliveries which aim to increase people's productivity by providing convenient services. Retailing is a method of supplying services to a manufacturer and selling them to customers. Face-to-face contact is replaced with online retail sales which makes contact through internet-based platforms. In this study, the researchers focused on establishing the factors affecting the performances of online food deliveries among GrabFood, Foodpanda, and Zomato Ph. They aim to assess the current online food delivery system, identify significant factors affecting online food delivery time and efficiency, and recommend ways to improve the current online food delivery system. The data was collected by having an online survey questionnaire for 200 respondents. The data were analyzed by using statistical and analytical tools such as descriptive statistics, SWOT analysis, ANOVA test, correlation analysis multiple regression analysis, risk assessment, and benchmarking. The findings revealed that the most crucial factor in an online food delivery application is the delivery factor followed by the process and the interface. The researchers have identified the significant relationships among the demographics, the subfactors of interface, process, and delivery and concluded that the delivery's subfactor has the most significant factors that could affect the online food delivery companies.

## Keywords

Retail, Online food delivery, Food delivery application, and Online.

## 1. Introduction

Retailing is a distribution process of a retailer by procuring goods and services from a distributor and selling it in small lots to a large number of customers. According to Dawson (2010), food retailing is a highly innovative sector within the entire food chain. E-commerce is growing rapidly and the food industry is also showing steady growth (Alagoz and Hekimoglu 2012). Sethu and Saini (2016) stated that E-commerce has overwhelmingly pervaded the lives of people as it helps them in managing their time better. Given the field of study, it is vital to know the importance of E-commerce in the business industry. Prior studies on food ordering have investigated that customers are most likely to use their mobile phones since online delivery has been increasing over the years as the online environment offers excellent opportunities for interactive and personalized marketing (Burke, 2002). Older adults are becoming a significant potential market for future service because they are becoming more familiar as they engage in various e-commerce activities such as online shopping (Zickuhr 2010). However, students are reluctant when making an online transaction and believe that there should be an effective and efficient measurement taken to enhance the trust between the customers and the service providers (Farah et al. 2018). The quality and reliability of the product, when made available online, should not be compromised along with the application safety of payment gateway and personal

information details, and assurance of attending to the inquiry of the customers concerning the goods, delivery, feedback, and more.

Previous studies were unable to present an in-depth analysis and provide evidence that merely talks about the key performance indicators for online food delivery to today's present economy. The gap of the research also revolves around identifying the needs and wants of the respondents who are young adults and students. This involves knowing their preference with the help of the key performance indicators. It would help to identify their ratings, comments, and evaluation regarding online food delivery services.

This research aims to assess the current online food delivery system, identify significant factors affecting online food delivery time and efficiency, and recommend ways to improve the current online food delivery system. This study is set to identify factors that affect performances of online food delivery, the researchers' data gathering method would strive to fulfill the gaps between the related literature by providing reliable data, statistics, and factors that have assisted this study. This study aims to determine the significant difference among the different companies per identified factors, possible relationships based on interface, process, and delivery, and the significant factors that affect the delivery time and efficiency of online delivery.

The findings of the study will enable online food delivery companies to point out the factors that could be problems and contribute to their downfall. The companies can minimize their negative feedback and decrease their company's rate of failure in business once they are aware that their system can be improved. This can help enhance employee's job performance and help the company's customers to generate new customers, be loyal in crisis, repeat transactions, and satisfy them. This can improve the performance of the whole business which can lead to company growth, profitability, and a much more efficient business.

This study will address the process of delivering food electronically for young adults, which includes students from the age of 16 to 35 years old in Manila, Philippines. It will cover the factors of Grabfood, Foodpanda, and Zomato that influence its online food delivery's performance, such as the interface features of the mobile application, process, and delivery. However, the researchers will not cover the cost price in the management and after-sales feedback of customers.

## **2. Literature Review**

According to R et al. (2018), the food industry has always been a profitable industry not only for producers and suppliers but also for retailers and consumers. Martinez et al. (2000) stated that the food industry has always been regarded as a mature and slow-growing sector with low research intensity and quite conservative in terms of the type of innovations introduced to the market. The innovations in the food industry could be a differentiating major success factor in today's aggressive and competitive food market and are considered a vital part of a business strategy (Guine et al. 2016). Food marketing and distribution strategy in the restaurant company is continuously turning from traditional purchasing techniques to internet food delivery systems where many options are provided by company owners such as online shopping, home delivery, pick-up, and drive-thru services in the food company (Hossain and Adelaja 2000). Sethu and Saini (2016) reported that people use online delivery because of their easy access to the internet and its convenience. Other companies offer an end-to-end transaction from booking, payment, and delivery services, while others provide a website or an application to place an order and be in touch with the restaurant. Das (2018) declared that technology had played an essential role in revolutionizing the food delivery service which motivated them to order food online. According to Lee et al. (2018), the findings of the Factual Survey on Small Business's Use of Online Delivery Services showed 95.5% of 1000 restaurant owners nationwide in Korea using delivery applications reported that net profits either rose (46.2%) or stayed the same (49.3%) after adopting delivery applications from the previous traditional method. Restaurant efficiency has improved the productivity and profitability of a restaurant business caused by technological advancement (Hong 2016).

According to Chen et al. (2009), the creative use of delivery methods has increasingly become a new source of differentiation and innovation for companies that seek to offer services and products profitably, providing greater value for customers and enhancing the delivery methods to increase profitability and reduce costs. Marcus and Gould (2000) stated that application design has been discovered to be an important factor in the online business environment, and the use of a smart device-based interface for customers to view, order and navigate has helped the restaurants in managing orders from customers immediately (Chavan et al. 2015). Zhang et al. (2000) studies show that website

design features can be regarded as hygiene and motivator factors that contribute to user dissatisfaction and satisfaction with a website. Hygiene factors are those whose presence makes a website functional and serviceable, and whose absence causes user dissatisfaction. Some of the categories of hygiene factors are Privacy and Security, Technical Aspects, Navigation, Impartiality, and Information Content. Improving the food delivery service wherein the system is designed to; avoid users making fatal errors such as changing their handled profile, tracking their food items in a GPS, and the availability of providing feedback and recommendations to their service providers while preserving the customers' database are also important factors. (R et al. 2018). Monitoring meal orders is a function of consumer interest, so they have an awareness of their meal delivery success. Several providers are already offering monitoring services (Metapack 2015). Mintel (2016) declared that potential problems may arise such as safety and privacy issues, healthiness, quality, the heat of the food, delivery charges, waiting time, reputational risks, and environmental problems while using online food delivery applications and this can create uncertainty to meet demands in the profitability of the business. Customers achieve a high degree of satisfaction when their expectations are met, which influences their online shopping attitudes, intentions, decisions, and purchasing activity positively but in contrast to this is the dissatisfaction that can also be negatively associated with these four variables (Ho and Wu 1999).

### 3. Methods

#### 3.1 Conceptual Framework

The primary goal of the study was to establish the significant factors affecting the performance of online food delivery applications. Figure 1 shows the important variations of the interface, process, and delivery rate necessary to achieve an online delivery of food that has high efficiency and delivery rate. Each aspect plays an important role in assessing what affects the delivery rate or the performance of the online food delivery company (application). Throughout the study, the researchers were guided by the following conceptual framework:

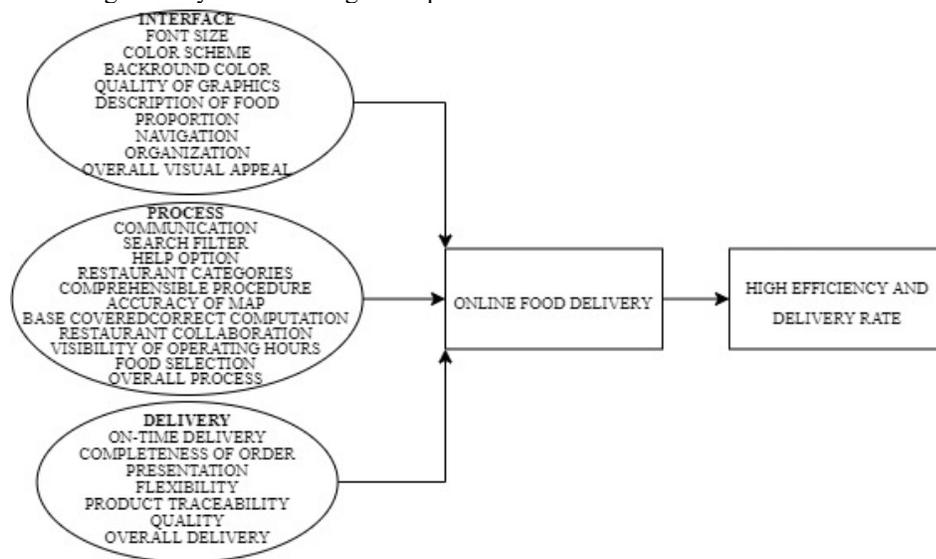


Figure 1. Conceptual Framework

#### 3.2 Statistical Tools

##### 3.2.1 Descriptive Statistics

The descriptive statistics will be useful to summarize the group of data collected during the survey using a combination of tabulated descriptions such as tables. The measure of spread will also help in describing the spread-out data as some of the ratings will be lower or higher than the others.

##### 3.2.2 Analysis of Variance (ANOVA)

The one-way ANOVA will compare the means within the companies and determines whether any of those means are statistically significantly different from each other. Specifically, it tests the null hypothesis, and the alternative hypothesis (HA) will only be accepted if the result of the ANOVA table states that there is a significant difference between a pair of the company as it breaks down the component of variation in the data. The comparison between the companies will then be made using the Tukey test, given that the different group has an unequal result with each other.

### **3.2.3 Correlation**

The Pearson correlation coefficient value can range between -1.00 and 1.00. If the coefficient value is in the negative range, the relationship between the variables is indirectly proportional. If the value is in the positive range, the relationship between the variables is directly proportional. If the Pearson correlation value is between 0 and  $\pm 0.3$  then the relationship is weak, if it is between  $\pm 0.3$  and  $\pm 0.7$ , then the relationship is intermediate, and the relationship is strong if it is between  $\pm 0.7$  and  $\pm 1$ . It is expressed as the mean of the XY column divided by the square root of the product of the sum of the column.

### **3.2.4 Regression**

The multiple linear regression will use multiple independent variables to assess its relationship to a dependent variable wherein it would show a minimum correlation to one another. It is expressed as  $Y = a + bX_1 + cX_2 + dX_3 + \epsilon$  where  $Y$  = dependent variable,  $X_1$ ,  $X_2$ , and  $X_3$  = independent variables,  $a$  = intercept,  $b$ ,  $c$ , and  $d$  = slopes, and the  $\epsilon$  = residual (error).

## **3.3 Analysis Tools**

### **3.3.1 System Flowchart**

Online food delivery is a process of ordering food from any restaurant that will be directly delivered to the customer through a web page or application like GrabFood, Foodpanda, and Zomato Ph. This process consists of a customer selecting the restaurant they want, scanning from the menu items, choosing an item, and then finally choosing for pick-up or delivery or what type of payment, either cash or card.

### **3.3.2 SWOT Analysis**

Strengths are things that each business does to set itself apart from the others. It is fundamental in a business since it is the competitive advantage that one company has over another. Weaknesses is an inherent feature of a company, but it also serves as a guide to improvement. Delivery services must continuously adapt and evolve and without adequate research and development, the company will not be able to progress. Opportunities serve as chances to improve more and are often due to external factors. It is the ability to invent and innovate that will propel the delivery service company to a new level. Threats are anything that can cause harm to a company, and it is imperative to take action against it to prevent becoming victims and having a significant negative influence on the company. Local delivery service is always at risk of being affected by a foreign corporation and the business objectives of major league players can be monitored by a SWOT analyst.

### **3.3.3 Benchmarking**

The researchers will use benchmarking as a process of measuring each online food delivery company's performance to identify the best practices so that the companies could improve their systems.

### **3.3.4 Risk Assessment**

The researchers will conduct a risk assessment, one of which will include Kepner Tregoe's risk mitigation measures for each company. Researchers will identify areas where potential problems could arise and have a significant impact on the company to plan measures and, eventually, revise a project plan to reflect these actions.

## **4. Data Collection**

The researchers conducted a survey to collect data on customer satisfaction of companies with online food delivery services, as well as the company's subfactors such as interface, process, and delivery. This survey was conducted online using Google Forms for the convenience of obtaining and systematizing the customers' feedback on their experiences with online food delivery services such as GrabFood, Foodpanda, and Zomato Ph. The questionnaire was distributed through social media platforms where 200 participants from the National Capital Region (NCR) could easily be sourced. Customers who order meals online mostly come from the National Capital Region (NCR). Participants are asked to rate each subfactor on a scale of 1 to 5. 1 being the lowest and 5 being the highest. The criteria were explained in-depth for each rating so that respondents could quickly indicate their rating based on their personal experience when it comes to ordering food online. The questionnaire was divided into three parts. The three parts of the survey were about how participants rate the company's application interface, the process of how the companies provide their service, and the delivery service.

## 5. Results and Discussion

### 5.1 System Flowchart

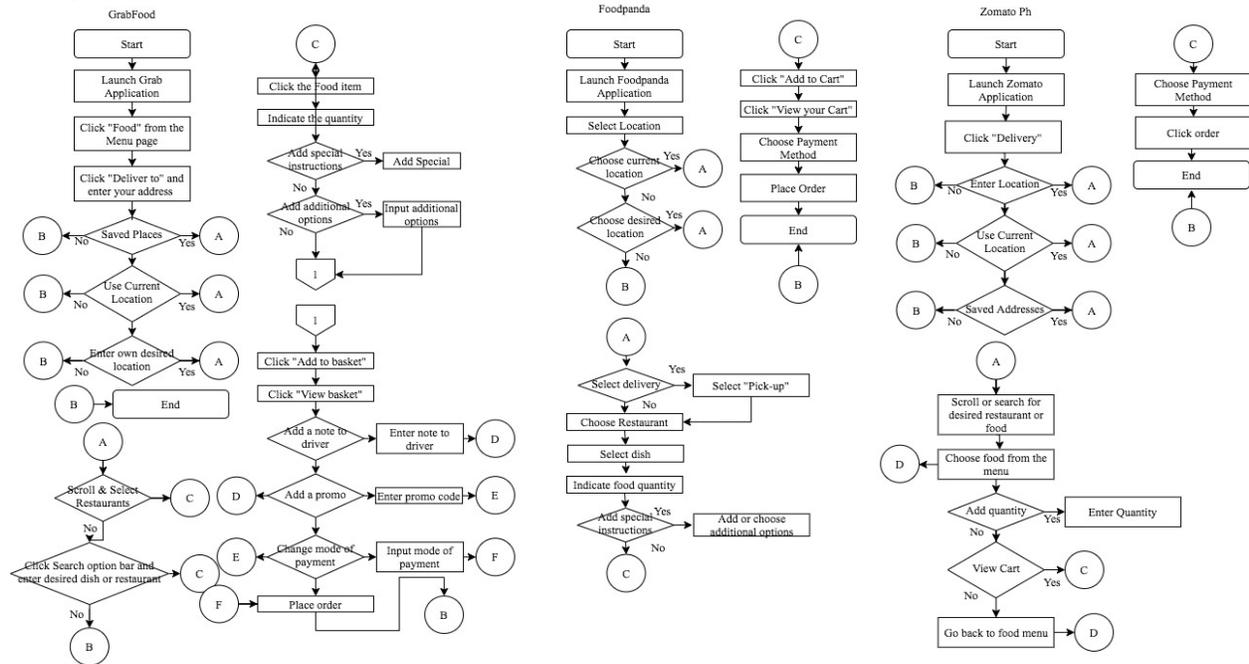


Figure 2. System Flowchart of GrabFood, Foodpanda, and Zomato Ph

Figure 2 shows the visual representation of GrabFood, Foodpanda, and Zomato on the process of ordering in sequential order. From launching the application to placing the ordered food, all the applications have a similar approach. It is frequently used in training to document an existing process or to assess its efficiency. Flowcharting can also serve as an aids in the assessment of service gaps or areas in need of improvement.

### 5.2 SWOT Analysis

Table 1. SWOT Analysis of GrabFood, Foodpanda, and Zomato Ph

	<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Threats</b>
<b>Grab Food</b>	Strong brand reputation and recognition User-friendly technology	Driver's attitude & behaviors Application cannot detect accurate locations and users are not able to input it	New services and innovations Technology advancement	Price competition
<b>Food Panda</b>	Strong brand reputation and recognition Strong management Quick delivery Trained employees Good customer support Wide coverage	Many restaurant selections	Expansion growing Increase in customer	Increased potential competitors
<b>Zomato PH</b>	Fast expansion Uniform design of the application Multiple acquisitions Brand Equity Good marketing	Security issues for the application	Further expansion More acquisitions	Increased potential competitors

In table 1, strengths define what a company excels in and what sets it apart from the competition. These are characteristics that set a company apart from its competitors. These are distinct positive characteristics, such as a strong brand image, a loyal customer base, or a unique technology that gives the company a distinct advantage over competitors. Weaknesses prevent GrabFood, Foodpanda, and Zomato Ph from reaching their full potential. They are areas that the company must improve in order to stay competitive. External elements that can provide a competitive edge to a company are referred to as opportunities. Such strategies can give a company a competitive advantage in the market, allowing it to achieve its long-term growth goals. Threats are circumstances that have the potential to cause harm to a company. It's critical to foresee threats ahead of time and take the required preparations to avoid being a victim of such external events. Food delivery has evolved into its own industry, with different online platforms vying for market dominance. Many businesses have also established online food delivery applications, competition is an inevitable component of the business world. The ongoing increase in internet ordering and meal delivery indicates that customers will receive better service. Customers can purchase whatever cuisine they want and have it sent to them at their preferred location. This increases competition for businesses. These threats are identified that enables these applications to examine the benefits and drawbacks of processes and identify how to close the gaps.

### 5.3 Demographic Profile of Respondents

The researchers surveyed 200 individuals through the internet. The respondents' demographic profile. 60% of the respondents are male, and 40% are female. Most of the respondents are below the age of 21, 60.5% are 18 years old, 20.5% are 19 years old, and 7% are 20 years old and 12% for ages 21 to 35. 88% of the respondents are students, while 12% are employed or working. Since a lot of them are students, most of the respondents have a monthly allowance of 1,000 Php-15,000 Php, 43.3% of the respondents have 1,000 to 5,000 monthly allowance, 27.5% have 5,000 to 10,000 monthly allowance, and 9.5% have 10,000 to 15,000 pesos per month and the rest of the respondents which is 19.7% have 15,000 above monthly allowance or income.

### 5.4 Most Selected Important Factor

The number of respondents who have selected the essential factor for an online food delivery application. The most important factor based on the results is delivery, which has 54.5%, while 37.5% said process and 8% said interface. The second most important factor is the process which has 52.5% while 35% said delivery and 12.5% said interface. The least important factor is the interface, which has 75.5%, while 15% said delivery and 9.5% said process. Therefore, the researchers conclude that the most important factor for an online delivery application is Delivery, followed by Process then Interface. The researchers also analyzed that 66.5% of their respondents use more than one online food delivery application, while 33.5% use only one application.

### 5.5 Analysis of Variance (ANOVA)

Table 2. Analysis of Variance (ANOVA) of GrabFood, Foodpanda, and Zomato Ph

Factors	GF	FP	Z	Average (Mean)	P-Value	Decision	Tukey Test
Font Size	4.1	4.0	3.0	3.7	0.001	w SD	GF vs Z/FP vs Z
Color Scheme	4.2	4.0	3.2	3.8	0.001	w SD	GF vs Z/FP vs Z
Description of Food	4.0	4.0	2.4	2.4	0.000	w SD	GF vs Z/FP vs Z
Proportion	4.0	3.9	2.3	2.3	0.000	w SD	GF vs Z/FP vs Z
Organization	4.2	4.0	2.3	2.3	0.000	w SD	GF vs Z/FP vs Z
Overall Visual Appeal	4.3	4.3	3.0	3.0	0.000	w SD	GF vs Z/FP vs Z
Communication	4.2	3.9	1.7	3.3	0.000	w SD	GF vs Z/FP vs Z
Help Option	3.9	4.0	1.2	3.0	0.000	w SD	GF vs Z/FP vs Z
Comprehensible	4.2	3.9	1.9	3.0	0.000	w SD	GF vs Z/FP vs Z
Accuracy of Map	4.1	3.9	2.3	3.3	0.000	w SD	GF vs Z/FP vs Z
Base Covered	4.0	3.7	1.9	3.2	0.000	w SD	GF vs Z/FP vs Z
Food Selection	4.0	4.1	2.9	3.6	0.000	w SD	GF vs Z/FP vs Z
Overall Process	4.2	4.1	2.7	3.7	0.000	w SD	GF vs Z/FP vs Z
Presentation	4.0	4.1	3.0	3.7	0.002	w SD	GF vs Z/FP vs Z
Flexibility	4.0	3.9	1.3	3.1	0.000	w SD	GF vs Z/FP vs Z
Product Traceability	4.2	4.1	1.7	3.3	0.000	w SD	GF vs Z/FP vs Z

<b>Overall Delivery</b>	4.2	4.0	3.0	3.7	0.000	w SD	GF vs Z/FP vs Z
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Table 2 shows the result of the Analysis of Variance (ANOVA) that is used to identify the significant differences between online food delivery applications. There are 17 factors, namely: Font size, Color Scheme, Description of Food, Proportion, Organization, Overall Visual Appeal, Communication, Help Option, Comprehensible Procedure, Accuracy of Map, Base Covered, Food Selection, Overall Process, Presentation, Flexibility, Product Traceability, and Overall Delivery among Foodpanda, GrabFood, and Zomato Ph that had significant differences. Using the Tukey test, the significant differences between GrabFood and Zomato, as well as Foodpanda and Zomato were determined. In conclusion, GrabFood was rated the highest on the overall rating for visual appeal, process, and delivery out of the three applications, which indicates that GrabFood customers were the most satisfied with their experience in ordering foods online.

### 5.6 Correlation

Table 3. Correlation Analysis of Organization, Communication, Product Traceability, and Completeness of Order

FACTORS		Organization	Communication	Product Traceability	Completeness of Order
<b>Overall Visual Appeal</b>	Pearson Correlation Value	0.726			
	P-Value	0.000			
<b>Flexibility</b>	Pearson Correlation Value		0.727	0.745	
	P-Value		0.000	0.000	
<b>Overall Delivery</b>	Pearson Correlation Value			0.733	0.713
	P-Value			0.000	0.000

Table 3 shows the strong significant relationship between the factors as a result of their correlation value ranging between  $\pm 7$  to  $\pm 1$ . Based on the results, the Overall Visual Appeal has a correlation value of 0.726 with Organization, meanwhile, Flexibility has a 0.727, and 0.745 correlation value with Communication and Product Traceability, correspondingly. For the Overall Delivery, it attained a correlation value of 0.733 for Product Traceability and 0.713 for the Completeness of Order.

Table 4. Correlation Analysis of Proportion, Description of Food, Comprehensive Procedure, Communication, Accuracy of Map, Flexibility, and Overall Process

Factors	Proportion	Description of Food	Comprehensive Procedure	Communication	Accuracy of Map	Flexibility	Overall Process
<b>Organization</b>	0.618 0.000		0.693 0.000	0.634 0.000		0.654 0.000	
<b>Comprehensible Procedure</b>	0.627 0.000			0.669 0.000	0.609 0.000	0.601 0.000	0.635 0.000
<b>Overall Visual Appeal</b>		0.666 0.000	0.627 0.000s		0.610 0.000		
<b>Help Option</b>				0.678 0.000		0.632 0.000	0.605 0.000
<b>Base Covered</b>				0.636 0.000	0.619 0.000	0.604 0.000	
<b>Product Traceability</b>			0.650 0.000	0.677 0.000			
<b>Overall Delivery</b>				0.600 0.000			0.645 0.000
<b>Flexibility</b>			0.637 0.000		0.629 0.000		0.637 0.000

Table 4 displays the factors' intermediate significant relationship and provides correlation values that indicate high intermediate results. The correlation value of the factors ranged from +0.6 and above and are directly proportional to

their corresponding variables with which they have a significant relationship. The Comprehensive Procedure factor has the most significant correlations with other factors, including Proportion, Communication, Map Accuracy, Flexibility, Overall Process, Organization, Overall Visual Appeal, Product Traceability, and Flexibility.

Table 5. Correlation Analysis of Search Filter, Accuracy of Map, Flexibility, Restaurant Collaboration, Visibility, Presentation, and Overall Delivery

Factors	Search Filter	Accuracy of Map	Flexibility	Restaurant Collaboration	Visibility	Presentation	Overall Delivery
<b>Food Selection</b>	0.628 0.000	0.648 0.000	0.602 0.000	0.633 0.000	0.636 0.000		0.639 0.000
<b>Base Covered</b>				0.614 0.000			
<b>On-time Delivery</b>						0.659 0.000	0.605 0.000

In table 5, the factors' relationship also obtained a significantly high intermediate result. The Food selection has a significantly high intermediate result with the Search Filter, Accuracy of Map, Flexibility, Visibility, Presentation, and Overall Delivery. For the Restaurant Collaboration, it is notably related to the Base covered by the company. Lastly, On-time Delivery could relate to the Presentation as well as the Overall Delivery of the orders.

## 5.7 Regression

Table 6. Regression Analysis

	Coef	SE Coef	T-Value	P-Value	VIF
<b>Restaurant Categories</b>	-0.1054	0.0469	-2.25	0.026	1.86
<b>Food Selection</b>	0.1053	0.0509	2.07	0.040	2.00
<b>Overall Process</b>	0.1564	0.0541	2.89	0.004	1.80
<b>Completeness of Order</b>	0.1099	0.0455	2.41	0.017	1.73
<b>Presentation</b>	0.1309	0.0452	2.90	0.004	1.93
<b>Product Traceability</b>	0.1962	0.0530	3.70	0.000	2.36
<b>Quality</b>	0.2680	0.0602	4.45	0.000	2.32

Table 7. Regression Summary

S	R-sq	R-sq(adj)	R-sq(pred)
0.401025	71.34%	69.98%	67.12%

Researchers have used regression to identify the significant factors that affect the efficiency of online food delivery applications. Table 6 and 7 shows the (7) significant factors that were identified to obtain a less than 0.05 p-value on the regression analysis are restaurant categories, food selection, the overall process, completeness of order, presentation, product traceability, and quality.

## 5.8 Risk Assessment

Table 8. Risk Assessment for the subfactors of interface, process, and delivery

Factors	Mode of Failure	Preventive Solution	Risk	Contingency Plan
<b>Description of Food</b>	Customers will be forced to remove or change items as they may not be familiar with other types of cuisine.	Adding a description of the ingredients for each food on the menu.	Restaurants may not have descriptions for their food.	Include images.
<b>Navigation</b>	The sizes and distances of the different concepts are	Make the interface balanced so that application users	Users may still be unable to navigate	Enlarge items that need to be highlighted and

	confusing to application users.	can easily figure out where the items are.	or do things effectively.	minimize what needs have less attention.
<b>Organization</b>	Customers are unable to address tasks in an orderly manner due to a cluttered page.	Create categories that make concepts easy to comprehend.	Different food categories can still produce a messy page.	Assemble the categories uniformly to avoid having a cluttered page.
<b>Communication and Flexibility</b>	Customers are unable to communicate with the driver.	Give employees the resources they need to be able to communicate with the customer.	Employees may have inappropriate attitudes and behavior.	Assess employees before hiring them.
<b>Help Option</b>	Unavailability of help option.	Provide a help option where customers can be guided by their questions.	Insufficient customer service.	Hire more employees to work with customer service.
<b>Comprehensible Procedure</b>	Customers are unable to comprehend the procedure.	Inform customers on how to use the application and create guides for them.	Some customers are individuals with disabilities.	Create a setting where the application can provide special assistance.
<b>Accuracy of Map</b>	The map can produce inaccurate locations.	Collaborate with companies that associate an accurate location and apply it to the application.	Some addresses are not available on the map.	Add a place in the application where customers can add their specific addresses.
<b>Base Covered</b>	Some places are out of delivery areas.	Expand delivery areas.	Insufficient employees.	Increase the number of employees.
<b>Food Selection</b>	The food menu is not updated.	Update the menu every time.	Companies would not comply.	Customers should be able to make changes to their orders.
<b>Overall Process</b>	Errors during the process.	Reduce errors.	The application needs to be updated regularly.	Fix a lot of errors and reduce the need for an update to the application.
<b>On-time Delivery</b>	Inaccurate time displayed on the application.	Provide a range of the estimated time that the food can be delivered.	Food can still be delivered late.	Only show restaurants that are near the location.
<b>Presentation and Quality</b>	Giving an unacceptable presentation of the food.	Provide a piece of secure equipment for the drivers to put the food.	The presentation of the food can still be messy.	Ensure that food containers are securely packed and warn customers.
<b>Product Traceability</b>	Customers are unable to keep track of their orders.	Provide a page where they can keep track of their orders.	The map may show inaccurate locations.	Give employees the resources to update their location during the delivery process.

Table 8 shows the risk assessment for the subfactors of interface, process, and delivery for each online food delivery company. Potential problems that could occur were identified and for each problem, a solution was given and for every risk that each problem could have a contingency plan is presented.

## 5.9 Benchmarking

Table 9. Benchmarking for the subfactors of interface, process, and delivery

<b>Metrics</b>	<b>GrabFood</b>	<b>Foodpanda</b>	<b>Zomato Ph</b>	<b>Best Local Online Platform</b>	<b>Best International Online Platform</b>
<b>Description of Food</b>	A description is provided of some food on the menu.	A description is provided of all food on the menu.	No description is provided.	A description is provided of all food on the menu.	A description is provided of all food on the menu.
<b>Navigation and Comprehensible Procedure</b>	The concepts are easy to understand and customers can easily approach tasks.	The application provides a brief guide.	The concepts are difficult to understand and do tasks.	The application provides a brief guide so customers can comprehend the procedure.	The application provides a brief guide so customers can comprehend the procedure.
<b>Communication and Flexibility</b>	The courier can be directly contacted if there is a change in the order.	The courier cannot be directly contacted and has to go through a live agent first which delays communication.	The couriers are not responsive.	The courier can be easily contacted if there is a change in the order and provides updates about the orders.	An operated support line can be contacted 24/7 for the couriers.
<b>Search Filter</b>	The search filter is easily accessible.	The search filter can only be accessed on the main page.	The search filter can only be accessed on the main page.	The search filter can be accessed in all parts of the application.	The search filter can be accessed in all parts of the application.
<b>Help Option</b>	The help option is not easily accessible.	The help option is easily accessible.	No help option can be found on the application.	The help option is easily accessible.	The help option is easily accessible and provides customer service.
<b>Organization and Restaurant Categories</b>	Different categories of cuisine are available. Categories such as Order again, Recommended for you, Weekly Deals are also available.	Different categories of cuisine are available and have an option where people can order for later.	Categories have to be set up and are not easily accessed.	Categories such as cuisines, fast foods, etc. are organized and visible.	Categories such as cuisines, fast foods, etc. are organized and visible.
<b>Base Covered</b>	Covers Metro Manila, Rizal, Cavite, Laguna, Pampanga, and Cebu	Covers Metro Manila, Cavite, Cebu, Davao, Pampanga, and Rizal	Not wide coverage of areas.	Wide coverage of places.	Wide coverage of places.
<b>On-time Delivery</b>	Provide an estimated time of a little over 30 minutes or less to deliver the order.	Some couriers might arrive late due to riding a bicycle instead of a motorcycle.	It takes longer than the given scheduled time for the food to arrive.	The ordered foods are delivered on time or less despite traffic conditions.	A system lets the couriers arrive at the pick-up point when the order is ready to minimize the waiting time.

<b>Product Traceability</b>	The product can be visibly traced in real-time.	The product can be visibly traced in real-time.	The product cannot be traced exactly due to the inaccuracy of the map.	The product can be visibly traced in real-time.	The courier's progress can be followed on a map in real-time.
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Table 9 shows the evaluated characteristics that indicate the differences of each factor in an online food delivery application. It shows the characteristics, weaknesses, and comparison of each online food delivery platform and what is the best practice for each factor from the best local online platform and the best international online platform. Overall it can be seen that GrabFood, Foodpanda, and Zomato Ph have a different description of the metrics in terms of the (3) factors: the interface, process, and delivery. GrabFood, Foodpanda, and Zomato Ph were compared and described under the different metrics to see their differences and similarities, and if it acquires the standards of Best Local Online and Best International platforms. The type of benchmarking is Functional in which it does not directly compete rather than it compares the results to best in class processes and practices. It improves performance through the continuous identification, understanding, and adaptation of external practices and processes identified within and outside the organization. It was shown that the delivery's subfactors have the most significant factors that could affect online food delivery companies, and the least is the factor interface.

## 6. Conclusion

In this research, the researchers were able to assess the current system of each online food delivery company in this study. The researchers conducted a survey online with the use of a web-based survey tool (google form), and they were able to gather data from the respondents to get feedback on their food delivery experiences. The researchers were also able to assess their strengths, weaknesses, opportunities, and threats, and the process of how people order in the application. The most important factor in an online delivery, according to 54.5% of respondents, was delivery, while the least important factor, according to 75.5% of respondents, was the interface. The survey also shows that 66.5% of its respondents utilize multiple online food delivery applications. The researchers were also able to show the statistics of different online food delivery applications per factor. The assessment was made by discussing different categories per phase and factor. The researchers then gathered the data and used it in statistical analysis to interpret them.

The researchers then used the output of phase 1 to conduct phase 2 of this study. For the second phase, the ANOVA and Tukey tests identified 17 factors with significant differences between the factors and concluded that GrabFood has the highest overall rating of 4.1 for visual appeal, method, and delivery. In addition, the application of Pearson correlation resulted in the identification of factors with high-intermediate to a strong significant relationship. Furthermore, regression determined 7 significant factors that affect the efficiency of the overall delivery. The R-sq indicates that 71.34% of the efficiency of online food deliveries is explained by the 7 significant factors. Each data obtained from phases 1 and 2 were then analyzed by the researchers to create a risk assessment that identified possible risks and has a contingency plan for each category and benchmarked to provide and show which is the best practice to do. Recommendations to improve the current system of each online food delivery company have been suggested.

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