



**Factors affecting consumers' decision
in ordering food online :
The case of Generation Y in Bangkok
(EE489: Seminar in Industrial Economics)**

Purida Luepuwapitakul

5704641876

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Abstract

This study investigates the significant factors that affect the choice of consumers in ordering food online. The data was collected by distributing online survey and paper survey in Bangkok area. The target population is Generation Y between 18-35 years old. The total of 261 respondents was analyzed using Probit model and found marginal effects of each independent variable on the chance of ordering food online. The results indicate that customer satisfaction is the significant factor affecting consumers' decision in ordering food online. The generation Y consumers who are students and freelancers tend to order food online more than others group of respondents. However, it is quite surprising that perceived trust which define by safe payment and good security system is not a significant factor. This might be because service providers and restaurants already have credibility towards customers.

Introduction

In the past, people went out and bought anything that they wanted by themselves but not for this present time. Due to the changing of economics conditions and emergence of new technology and internet, people's living conditions and living styles have been changed. Time is important and valuable, especially for people in the urban area like Bangkok that have to live with hustle lifestyle. With an emergence of new technology and internet, consumers' behavior and business models have changed.

As the consumption of online media is growing, many companies have to adopt online businesses and services to keep up. Nowadays, you just only order and buy anything that you want through your electronic devices like mobile phones and computers. Then the ordered goods will be directly delivered to your home. Online purchasing like online shopping, online food ordering and online payment become more popular and play important role in people lifestyles.

Food is one of the most popular goods that people order online. When you want to eat something from a popular or even normal restaurants, you just order the food online and wait to eat at your home within only 1-3 hours. The use of online food ordering and food delivery services becomes more popular for Bangkok people in this period.

According to an increasing usage of online food ordering, food delivery service is the main service which boost more revenues for both normal restaurants, chain restaurants as well as food delivery service providers. Without food online ordering service, food delivery service by both restaurants and service providers will not be a significant factor that drives more revenue to the business. The more consumers order food online, the more revenue increased.

As a result, this study is meant to analyse the factors that influencing consumers' decision in ordering food online. In addition, the study will focus mainly on Generation Y consumers in Bangkok area who are the potential consumers.

Objective of the research

This research aims to find the significant factors affecting the choice of Generation Y consumers in Bangkok whether to order food online or not, as well as explore the factors that encourage or discourage their decisions.

The findings can justify some Generation Y consumer insight or information on factors that might affect their decisions when ordering food online which can guide and enable restaurants and food delivery service providers to improve the services and develop new services to gain more revenues and market shares in the high competition market. Consumers will also get more satisfaction and facilities from their improvement and development. Additionally, this study could be a foundation for future studies about online purchasing of other products.

This research consists of 5 sections, proceeds by introduction, followed by literature review, methodology, results or findings, and conclusion and limitation. The next part provides a brief background of food online ordering and delivery business in Thailand. Literature Review from many studies and theories related to the topic is described in the second section. In the third section, methodology of the research, variables explanation, data collection and statistical treatment are expressed. Result and analysed data are shown in the fourth section. Lastly, the conclusion and limitation of this research are presented in the fifth section.

Brief Background

In this technology era, the internet is one of the most powerful forms of media. The consumption of traditional media is declining while the consumption of online media is growing. The younger generation also causes an increasing in consumption of online media. As a result, many companies have started to adopt online business strategies.

Since people consume more through online channels, restaurant businesses have adopted 'Online food ordering'. Consumers can easily order food online through both websites and applications.

Chain restaurants like KFC, McDonald's, Yayoi, S&P, Pizza Hut, etc. have created their own websites and mobile applications for online orders and deliver the ordered food by themselves. Extra revenue is created from the delivery fee paid by the customers which is a fixed rate for all distances.

An internet also leads to the creation of "middlemen" for restaurant businesses which is the food online ordering and delivery companies like LineMan, Ubereats, Food Panda and Eat ranger. These middlemen create the relationships with the restaurants and list their partnered restaurants on their online platform, websites and mobile applications. Customers can then place their order on the online platform. The income for these middlemen is generated from both commission fees from their partnered restaurants and delivery fees from customers. The delivery fees are calculated by the distance between ordered restaurants and requested destinations. The longer distance, the more expensive of the fees.

Different companies have different business model to earn income. For example, Food Panda will deduct 30% from the food price as the main income while LineMan will earn income mainly from the delivery fees (Positioningmag, 2017).

Food Panda is the first company that has launched the service in Thailand since 2014 (brandinside, 2017). While this new business model gain more popularity, the new players, such as LineMan and Ubereats, have entered in the market and launched the service in the beginning of 2017.

An increasing usage of food online ordering and delivery companies have caused the growth of food delivery market value since 2014. The recent information from Kasikorn research center estimated that the market value of food delivery would increase 11-15% from 2016 and would be around 26,000-27,000 millions baht in 2017. Up until now, there are many players in this market like LineMan, Ubereats, Food Panda, Eat ranger, Ginja, Now delivery, etc.

However, there are only 3 main popular players in Thailand, which are LineMan, Food Panda and Eat ranger. Promotions are extensively used as a tool to increase the usage of one player more than others as well as to gain more market share. Popular promotions used by every player are free delivery and discount on delivery fees.

According to Korlarp Suwacharangkul, LineMan Marketing Manager (Positioningmag, 2017), other 4 major areas that used to compete in this market are quickness, convenience, comprehensive services and reasonable price.

Literature Review

This section introduces the related and relevant researches and theories used to identify the factors affecting consumers' decision in ordering food online and to build the model for testing. The background of online shopping and online consumer behavior is briefly reviewed in the first part. Then the research on factors affecting online purchase decision of consumers is described in the second part.

Online shopping and consumer behavior towards online shopping

Dholakia(2002) states that the strong dependence on the Internet is changing people's living conditions and living styles. Business as well as consumers are rapidly reforming all over the world. E-commerce plays an important role in many businesses and becomes a significant business style(Senecal and Nantel, 2004). Internet impels new business processes, facilitates marketing activities and reduces cost for many businesses. An extreme use of the Internet creates more distribution of goods and services, two ways communication and business transactions between producers/sellers and consumers/buyers.

Because of an emergence of Internet and E-commerce, consumers can easily reach information and consume goods and services. Together with many facilities of online purchasing and other innovations, 'online shopping' has become one of the main channels for consumption.

Wolfenbarger and Gilly(2001) mention that customers who shop online are not only to buy the demanded goods, but also to experience the different characteristics of stores and sellers. Fung and Lee (1999) also illustrate that the trust and satisfaction of the consumer are also important for the repeated purchase. Factors affecting consumer purchasing decision are also important for developing and improving goods and services to meet consumer needs(Kotler, 2000). As such, there are many factors that influence consumer behavior and decision for purchasing online that producers/sellers need to know.

Factors affecting online purchasing decision of consumers

There are many researches that have been conducted to identify the factors affecting consumers' online purchasing decision.

Lee and Ndubisi (2011) found that there is a significant linear relationship of perceived value, perceived ease of use, perceived usefulness, the firm's reputation, privacy, trust, reliability and functionality, to online repurchase intentions. The authors used technology acceptance model (TAM) as a ground for research framework. Data was collected using survey questionnaire and analyzed using regression model. The technology acceptance model (TAM) proposes that perceived usefulness and perceived ease of use influence users' intention to utilize information technology (Davis 1989). Consumers attitude toward the product is influenced by their beliefs which related to perceived usefulness and perceived ease of use. This model provides significant benefits and have high reliability and validity (Adam et al., 1992) and it was one of the most popular theories that many researchers used.

According to the 'Evidence of Online Shopping : A Consumer Perspective by Nuseir, Arora, Al-Masri and Gharaibeh(2010), E-promotion and security have a strong effect that influence consumers purchasing decision through internet. As such among five factors in this research, these two variables are interesting variables to be used.

The 'Unified Theory of Acceptance and Use of Technology (UTAUT)' is the model developed to investigate the acceptance of a technology in an organizational context usage (Venkatesh et al. ,2003). The theory is illustrated that the direct factors affecting information technology (IT) behavioral intention and usage behavior are performance expectancy, effort expectancy, social influence, and facilitating conditions. The theory also assumes that the effect of core constructs is lessened by gender, age, experience, and voluntariness of use (Venkatesh et al. ,2003). The UTAUT model is useful and acceptable which was adopted by many researchers.

Demographic profile or personal characteristics of consumers, including age, gender, income levels, occupation, country of residence, education level, marital status, and attitudes also influence their purchasing decision towards online shopping (Hashim et al., 2009).

In addition, quality perceived by customers can be divided into six categories– namely, information ease of use, quality, consumer service, website design, process controllability and outcome quality. Quality of system, information featured, as well as satisfaction also influence consumers to use an E-commerce website (Pujani, 2011). According to the finding on 'Key Success Factors of Online Food Ordering Services : An Empirical Study' by Kedah (2015), website quality has a positive relationship with website trust and service quality also has a positive relationship with customer satisfaction.

According to an information from the literature review, there are many researches about the factors affecting consumers' decision in online buying. However, the factors affecting consumers' decision in online buying that only focuses on one specific product or service and one group of consumer was less studied.

As such, this research aims to find the factors that affecting consumers' decisions in ordering food online in the case of Generation Y consumers in Bangkok.

Independent variables used in this research model are developed from Technology Acceptance Model(TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) and

‘Analyzing key determinants of online repurchase intentions’ research by changing and adding some factors that were found from literature review. Since these two models are reliable and widely accepted, they are suitable to use as a basic model to develop the framework for this study.

Dependent variable of this research is the ‘Decision to order food online’ which will be affected by five main factors which are Demographic factors, Personal factors, Social Influence, Customer Satisfaction and Perceived trust. Independent variables affecting consumers’ decision in ordering food online are derived from these five main factors which will be elaborated more in the Methodology section. The results and findings will give some consumers insight as a guideline to improve and develop the services for online food ordering service providers.

Methodology

This section is presented in 3 parts– namely Variables, Data Collection and Statistical treatment. Dependent and independent variables used in the model are discussed under the first part, followed by the characteristics of the sample, procedure, method and the questions in the survey under the second part. Once the data is collected, the statistical treatment such as cleaning of the data, selection of the models used and running the models are discussed under the last part.

Variables

Since the focus is on the behavior and decision to order food online of Bangkok people, the most important decision is whether to order food online or not. As such, the Dependent variable(Y) is the binary choice decision whether to order food online or not. From the literature review, there are 5 broad categories of independent variables(X) which are Demographic factors, Personal factors, Social Influence, Customer satisfaction and Perceived trust.

People are unique and have different utility functions and characteristics, so demographic factors and personal factors related to online shopping are considered in the model.

According to the ‘Unified Theory of Acceptance and Use of Technology (UTAUT)’ model, social influence is one of the factors affecting the acceptance and usage of IT behavior by an individual which can affect consumers’ decision.

Customer satisfaction are the main factors that every producer should focus on since it is the main indicator of whether consumers will buy goods online or offline or not. As such, this factor is included in the model.

Lee and Ndubisi (2011) found the significant linear relationship of trust on online repurchase intentions, and trust is one of the factors that can affect consumers’ decision when they purchase online. Hence perceived trust is the last factor included in the model. Along with an information from the literature review, all independent variables were derived.

The total number of independent variables is 22 variables, 6 variables from demographic factors, 2 variables from personal factors, 4 variables from social influence, 8 variables from customer satisfaction and 2 variables from perceived trust. *Table 1* shows the definition of all variables.

Table 1 : Variables Definition

Factors	Variables	Definition
Dependent Variables		
Ordering food online	Order	Within last month until now, you order food online or not yes=1, no=0
Independent Variables		
1. Demographic factors	Income	Personal income per month (THB)
	Age	Age of the respondents (Between 18-35 years old)

	Education (edu)	Level of respondent's education (Secondary Education, Bachelor, Diploma, Higher than Bachelor) (<i>Average years of education</i>)
	Gender	Female=1, Male=0
	Occupations	Present Occupation of respondent (Students/Stud,Private Employee/Private, Retail/Business Owner/Owner,Government or State Enterprise officer/Gov, Freelancer/Free, Housewife)
	Cooking	Not usually cooking=1, Usually cooking=0
2. Personal factors (AvgPersonal)	Resources	"I have resources that are needed for ordering food online (ex. Smartphone,Computer,Internet)." Opinion (<i>0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale</i>)
	Online shopping	"I always purchase online." Opinion (<i>0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale</i>)
3. Social Influence (AvgSocial)	Friends and Families	"I want to order food online because my friends and families suggest me to do." Opinion (<i>0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale</i>)
	Friend and Family's behavior	"Most of my friends and families order food online." Opinion (<i>0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale</i>)
	Advertising	"I think that advertising food online ordering application make me want to order food online." Opinion (<i>0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale</i>)
	Social Media	"Opinion of the people who ordering food online in social media and by word of mouth make me want to order food online." Opinion (<i>0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale</i>)
4. Customer Satisfaction (AvgCus)	Food	"I think that food that I order online have good taste and quality and I get all ordered food." Opinion (<i>0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale</i>)
	Delivery	"I think that delivery service is very good and on time." Opinion (<i>0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale</i>)

	Application and Website	"I can easily understand and use the application and website to order food online because they are easy to use and not too much process for ordering." Opinion (0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale)
	Information	"Application and Website provide full information and review of restaurants and foods for customers." Opinion (0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale)
	Restaurants	"Application and Website have many types of food and restaurant to choose." Opinion (0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale)
	Pricing	"Price of food and delivery is charged at the rational rate that I can accept." Opinion (0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale)
	Time saving	"I think that order food online is convenient and can save a lot of time to go out and buy food myself." Opinion (0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale)
	Promotion	"Many promotions of ordering food online that are worthy and attractive make me want to order food online via applications and websites." Opinion (0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale)
5. Perceived Trust (Avgtrust)	Payment	"I think that food online ordering service providers safe and reliable payment system." Opinion (0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale)
	Security	"I think that food online ordering service providers have good security system to keep my information privacy." Opinion (0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree, 4=Strongly agree, Likert scale)

Data Collection

The data was observed and collected by google form (Online Survey) method and paper survey. This empirical study was carried out in Bangkok area. The target population are Generation Y age between 18-35 years old.

Since Generation Y people mostly use an online channel for communication, both online social networking and online media have been increasing. It can be said that this Generation Y lives in a digital world (Yarrow and O'Donnell, 2009). They usually consume and find information from online media and internet more than offline media (Reisenwitz and Lyer, 2009). Undoubtedly, they are the group that mainly uses online channels for consumption.

The sample selected is a result of the total collection from March to April 2018. The surveys were distributed through online channels such as Facebook, Instagram and Line and also via offline channel by going to 2 places and asking respondents to do the survey. Total of 261 responses were collected by online survey and paper survey, of which 218 responses are from online survey and 43 responses are from paper survey. To get more diverse information, the paper surveys were collected from 2 different places which are The Mall Bangkai and Siam Square. Out of 43, 20 responses were collected at The Mall Bangkai and 23 responses were collected at Siam Square.

The questionnaire consists of 3 sections. First section asks about the past and current food online ordering behavior and channel used in ordering food online. Second section asks about factors affecting the decision when ordering food online. Under this section, respondents are asked to indicate their level of agreement or disagreement on each statement related to every factor that can affect their decisions to order food online. There are 5 choices which are, mostly disagree(0), disagree(1), neutral(2), agree(3), strongly agree(4) for them to choose. The questions about personal factor like gender, ages, education, income, etc. are at the end of the questionnaire. The questionnaire is presented in the Appendix.

Statistical treatment

After collecting the data from all respondents, the data needed to be transformed into numerical form to be able to analyse using STATA program. This numerical form is shown in the *Table 1*. Due to the suggestion of S.Walter(2008), sometimes, putting too many variables in

the regression model will make the prediction of results worse because of redundancy of data. So the grouping of related variables is needed.

There are 5 broad categories of independent variables which are demographic factors, personal factors, including personal information related to online shopping, social influence, customer satisfaction and perceived trust.

The demographic factors will then be determined by demographic information, which are Income, Age, Education, Gender, Occupation and Cooking.

The personal factors will then be determined by personal information related to online shopping which are determined by the average opinion score level in online shopping, and resources.

The social influence will then be determined by the average opinion score level in friend and family's opinion, friend and family's behavior, social media and advertising.

The customer satisfaction will then be determined by the average opinion score level in food, delivery, application and website, information, restaurants, pricing, time saving and promotions.

The perceived trust will then be determined by the average opinion score level in payment and security. Then, the models are presented as follows.

As I wanted to see whether the real condition of consumers, which is represented by demographic information really affects their decision or not. Only demographic factors will be included in the First model.

First Mode

$$\Pr(Y = p) = I_{pi} \beta_p^* + A_{pi} \delta_p^* + E_{pi} \gamma_p^* + G_{pi} \eta_p^* + O_{pi} \kappa_p^* + K_{pi} \sigma_p^* + \varepsilon_i$$

$; i = 1, \dots, 261, p = 0, 1$

Where :

- $\Pr(Y = p)$ is the probability of consumer ordering food online within last month until the present, where $p=0$ when respondents don't order food online, $p=1$ when respondents order food online.
- $I_{pi}, A_{pi}, E_{pi}, G_{pi}, O_{pi}$ and K_{pi} are demographic factor variables.
- I_{pi} represents income per month.
- A_{pi} represents age.
- E_{pi} represents average year of education (Secondary education=12, Diploma=14, Bachelor=16, Higher than bachelor=18).
- G_{pi} represents gender, where female respondent is coded as 1 and male is coded as 0.
- O_{pi} represents occupation which is controlled as dummy variables; will be 1 if respondent is student and 0 if otherwise; will be 1 if respondent is private employee and 0 if otherwise; will be 1 if respondent is retail or business owner and 0 if otherwise; will be 1 if respondent is Government or State Enterprise officer and 0 if otherwise; will be 1 if respondent is freelancer and 0 if otherwise; will be 1 if respondent is housewife and 0 if otherwise.
- K_{pi} represents cooking behavior of respondent which is controlled as dummy variables; will be 1 if respondent usually cooks and 0 if otherwise.

- β^*_{pi} , δ^*_{pi} , γ^*_{pi} , η^*_{pi} , κ^*_{pi} and σ^*_{pi} are the difference probability of each demographic variable affecting food online ordering. If the coefficient of each demographic variable is positive, this means that the variable has more probability to order food online and vice versa.
- ε_i is an error term.

Then, all factors will be included in the Second model as follows.

Second Model

$$\Pr(Y = p) = I_{pi}\beta^*_{pi} + A_{pi}\delta^*_{pi} + E_{pi}\gamma^*_{pi} + G_{pi}\eta^*_{pi} + O_{pi}\kappa^*_{pi} + L_{pi}\nu^*_{pi} + S_{pi}\rho^*_{pi} + C_{pi}\varpi^*_{pi} + T_{pi}\tau^*_{pi} + \varepsilon_i$$

$$; i = 1, \dots, 261, p = 0, 1$$

- L_{pi} is an average of personal factor variables including personal information related to online shopping and needed resources for online shopping.
- S_{pi} is an average of social influence factor variables including friend and family's opinion, friend and family's behavior, social media, advertising.
- C_{pi} is an average of customer satisfaction factor variables including food quality, delivery service quality, design and feature of application and website, information, restaurants, pricing, time saving and promotions of service providers.
- T_{pi} is an average of perceived trust factor variables including payment and security system of service providers.
- All personal, social influence, customer satisfaction and perceived trust factor variables are an ordinal variables rating by five Likert scale, 0=mostly disagree, 1=disagree, 2=Neutral, 3=Agree and 4=Strongly agree.

- ν^*_p , ρ^*_p , ω^*_p and τ^*_p the difference probability of personal, social influence, customer satisfaction and perceived trust variables affecting food online ordering. If the coefficient of each variable is positive, this means that the variable has more probability to order food online and vice versa.

Since the dependent variable is binary, I run Probit in these two models and find the marginal effects that of each explanatory variable on the chance of order food online or ($y=1$).

Results and Discussion

Once the data was collected, the average age of respondents is 25.31 with standard deviation of 5.096, which fell into Generation Y age range. Around 70.115% of the respondents are female. The average income per month of respondents is 27,902 baht with the standard deviation of 16,009 baht which implies that the most of the respondents are in the middle income group. The respondents mainly, 76.245%, are undergraduate students while the rest comprise about 3.831% secondary education, 7.870% diploma, and 13.41% higher than Bachelor degree students. The respondents consist of 46.360% students, 26.437% private company employees, 9.195% retail or business owners, 7.407% freelancers, 6.513% government or state enterprise employees and 5.364% housewife.

The survey found that 52.490% of all respondents have ordered food online within last month while the rest 47.509% have not, and the average frequency of ordering food online per month is around 4.307 times. Website are used by 52.555% of respondents who have ordered food online while 26.277% using LineMan, 10.949% using Food Panda, 7.299% using Ubereats and 2.919% using GrabFood.

Then, the descriptive statistic of both dependent and independent variables is shown in the *Table 2*. The definition of each variable was previously explained in Methodology section.

Table 2: Descriptive statistics of all variables.

VARIABLES	MEAN	SD	MIN.	MAX.
Dependent variable				
Order	0.525	0.500	0	1
Independent variables				
Gender	0.701	0.459	0	1
Age	25.31	5.096	18	35
Income	27,902	16,009	15,000	75,001
Cooking	0.563	0.497	0	1
Online shopping	3.031	1.119	0	4
Resources	3.590	0.782	0	4
FriendandFamilys behavior	1.973	1.158	0	4
Friendsandfamilies	2.180	1.096	0	4
Advertising	2.759	1.007	0	4
Socialmedia	2.690	1.113	0	4
Food	2.536	0.922	0	4
Delivery	2.716	0.853	0	4
ApplicationandWebsite	2.962	0.906	0	4
Restaurants	2.690	0.924	0	4
Information	2.521	1.036	0	4
Timesaving	3.142	0.894	0	4
Pricing	2.529	0.967	0	4
Promotions	3.138	0.951	0	4
Payment	2.862	0.816	0	4
Security	2.701	0.896	0	4
Occupations				
Stud (<i>Student</i>)	0.464	0.500	0	1
Free (<i>Freelancer</i>)	0.0613	0.240	0	1
Gov (<i>Government employee</i>)	0.0651	0.247	0	1
Private (<i>Private company employee</i>)	0.264	0.442	0	1
Owner (<i>Business owner</i>)	0.0920	0.290	0	1
Housewife	0.0536	0.226	0	1
AvgPersonal	2.207	0.512	0	2.667
AvgSocial	2.400	0.869	0	4
AvgCus	2.779	0.628	0.500	4
Avgtrust	2.782	0.776	0	4
edu (<i>Education</i>)	4.176	7.052	0	18

Table 3: Summary of Probit and Marginal effects results of first and second model.

VARIABLES	(1) <i>Model 1</i> Order	(2) Order mfx dydx	(3) <i>Model 2</i> Order	(4) Order mfx dydx
Gender	0.000158 (0.191)	6.30e-05 (0.0762)	0.0716 (0.199)	0.0285 (0.0794)
Age	0.0111 (0.0286)	0.00443 (0.0114)	0.0264 (0.0304)	0.0105 (0.0121)
Cooking	0.190 (0.176)	0.0756 (0.0701)	0.354* (0.189)	0.141* (0.0741)
Income	1.64e-06 (6.50e-06)	6.55e-07 (2.59e-06)	2.13e-06 (6.97e-06)	8.50e-07 (2.78e-06)
edu	-0.0523 (0.0831)	-0.0208 (0.0331)	-0.134 (0.0837)	-0.0533 (0.0334)
Gov	-0.123 (0.581)	-0.0491 (0.231)	-0.191 (0.645)	-0.0760 (0.255)
Stud	1.626*** (0.546)	0.581*** (0.156)	1.549*** (0.583)	0.559*** (0.171)
Free	1.341** (0.552)	0.418*** (0.105)	1.571*** (0.583)	0.458*** (0.0889)
Private	0.794* (0.466)	0.301* (0.161)	0.594 (0.498)	0.230 (0.183)
Owner	1.023** (0.511)	0.354*** (0.135)	0.984* (0.542)	0.345** (0.149)
AvgPersonal			0.226 (0.194)	0.0900 (0.0771)
AvgSocial			0.192 (0.127)	0.0766 (0.0507)
AvgCus			0.454** (0.212)	0.181** (0.0845)
Avgtrust			0.109 (0.133)	0.0434 (0.0529)
Constant	-0.684 (1.436)		-2.373 (1.535)	
Observations	261	261	261	261

Robust standard errors in parentheses * p<0.01, ** p<0.05, * p<0.1**

In column 1, Probit result of the *First model* indicates that student variable significantly affects generation Y consumer decision at 1% level of significance, and freelancer and retail or business owner variables are significant at 5% level of significance. The result implies that student, freelancer and retail or business owner have more probability in ordering food online

than other occupations. Student have the highest probability to order food online when comparing with freelancer and retail or business owner since the coefficient is 1.63 which is higher than the other two occupations.

However, other demographic factors like gender, age, income and education and the frequency of cooking are not significant in this model.

Marginal effects of the Probit result of First model are shown in *column 2*. Student, freelancer and retail or business owner positively affect the probability of ordering food online. A change of student, freelancer and retail or business owner from zero to one positively changes the probability of ordering food online by 58.11%, 41.84% and 35.42%, respectively. Student, freelancer and retail or business owner are more likely to order food online than baseline group by 58.11%, 41.84% and 35.42%, respectively. They have more probability to order food online than others. Baseline group is defined as the other occupations that are excluded in the model. In this case, actor and actress are the baseline group because this group is another occupation the have more tendency to use online services because of their timeless lifestyle.

In the *column 3*, Probit result of the *Second* model indicates that student and freelancer significantly affect generation Y consumer decision at 5% level of significance. Set of customer satisfaction variables(AvgCus) is also significant at 5%. While the rest of the variables are not significant in this model.

The result implies that generation Y consumers mainly take into consideration the satisfaction and facility they received from using food online ordering services when making the decision. Since the set of customer satisfaction variable(AvgCus) is determined by average opinion score level in food quality, delivery service quality, design and feature of application and website, Information, restaurants, pricing, time saving and promotions of service providers, theses are the factors that affect consumers' decision when ordering food online. Moreover, generation Y

consumers who are student and freelancer have higher probability to order food online than others.

Since the frequency of online shopping and sufficient necessary resources for online purchasing do not guarantee that they will order food online, it is possible that the set of personal factor variable(AvgPersonal) which determined by average opinion score level in online shopping, and resources is not significant.

Only some customers can be influenced by opinion from others, reviews in internet and advertisements, so it is also possible that the set of social influence(AvgSocial) is not significant.

It is quite surprising here that the set of perceived trust variables(Avgtrust) is not significant because payment and security system are the factors that consumers consider when purchasing online.

In addition, I found that other demographic factors like gender, age, income and education, some occupations and the frequently of cooking are not significant in this model.

Marginal effects of the Probit result of Second model are shown in *column 4*. Student and freelancer positively affect the probability of ordering food online. A change of student and freelancer from zero to one positively changes the probability of ordering food online by 55.94% and 45.77%, respectively. This suggests that these 2 occupations are more likely to order food online than others.

The result also suggests that consumers are more likely to order food online by 18.09% when average of opinion score on factors that affecting customer satisfaction increase by 1 unit. The more customer satisfaction from using the service, the more tendency to order food online.

Conclusion

This section presents the conclusions of research findings on factors affecting consumers' decision in ordering food online in the case of Generation Y in Thailand.

From the analysis of the result, the research found that customer satisfaction included food quality, delivery service quality, function and design of application and website, comprehensive information, variety of restaurants, pricing, time saving and promotions of service providers is significant factors affecting Generation Y consumers' decision of ordering food online while the rest are not. This is undoubtedly because the previous finding of Pujani in 2011 also indicated that customer satisfaction and quality of the services are the significant factors that influencing consumers to use e-commerce.

Service providers should focus on these factors which significantly influence and encourage customers to use their services. In addition, students and freelancers should be the target customers since they have higher probability to order food online. Even in column 1 shows that retail or business owner is significant, it is not significant in the column 2. As such, it cannot clearly conclude that if consumers are retail or business owner, they will have higher tendency to order food online than other occupations.

If the service providers want to stay in this high competitive market, they must be able to develop and improve their services which can increase customer satisfaction. Along with the right target, generation Y who are students and freelancers, the highest market share brand in this market is within reach.

Once food online ordering service providers improve their services or develop new services to serve consumers, consumers also also get more satisfaction and facilities. As a result, this research can create benefit to both food online ordering service providers and consumers.

However, it is surprising that the perceived trust is not significant because safe payment and good security systems are the factors that respondents in the survey consider when ordering food

online. This might be because service providers and restaurants already have credibility towards customers by their safe payment and good security system.

As such any research, this paper also faced the limitations. Due to the time constraint, the size 261 respondents, is considered very small in comparison to the total number of Generation Y in Bangkok and most of the respondents mostly are middle income. This study could only account for the factors affecting food online ordering decisions of middle income Generation Y consumers in Bangkok. If the size of respondents is increased, other factors have possibility to be a significant factor. For further study, the research can increase number of respondents from another area and income level.

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Appendix

Questionnaire

แบบสอบถามทัศนคติและปัจจัยที่มีอิทธิพลต่อการสั่งอาหารออนไลน์ของผู้บริโภคในเขตกรุงเทพมหานคร

แบบสอบถามนี้จัดทำขึ้นโดยนิสิตภาคการตลาด คณะเศรษฐศาสตร์ มหาวิทยาลัยธรรมศาสตร์ โดยมีจุดประสงค์เพื่อศึกษาเกี่ยวกับทัศนคติและปัจจัยที่มีอิทธิพลต่อการสั่งอาหารออนไลน์ของผู้บริโภคในเขตกรุงเทพมหานคร สำหรับงานวิจัยจบการศึกษาปริญญาตรี ขอขอบพระคุณในความร่วมมือในการตอบแบบสอบถาม

ส่วนที่ 1: ข้อมูลเกี่ยวกับพฤติกรรมการสั่งอาหารออนไลน์

1. ภายในเดือนที่ผ่านมาและปัจจุบันท่านสั่งอาหารออนไลน์ไหม

- สั่ง
- ไม่ได้สั่ง (ข้ามไปส่วนที่ 2)

2. ในเดือนที่ผ่านมาท่านสั่งอาหารออนไลน์กี่ครั้ง

ตอบ : ครั้ง

3. โดยปกติท่านสั่งอาหารออนไลน์ผ่านช่องทางไหนบ้าง? (ตอบได้มากกว่าหนึ่งอย่าง)

- Website
- Uber eat
- LineMan
- Foodpanda
- Eat ranger
- อื่นๆ(ระบุ).....

4. โดยปกติท่านสั่งอาหารออนไลน์ผ่านช่องทางไหนมากที่สุด?

- Website
- Uber eat
- LineMan
- Foodpanda
- Eat ranger
- อื่นๆ(ระบุ).....

ส่วนที่ 2: ความคิดเห็นเกี่ยวกับปัจจัยที่ส่งผลให้เกิดการสั่งอาหารออนไลน์

กรุณาเขียนเครื่องหมาย ✓ ที่ตรงกับความเห็นของท่านมากที่สุด

ข้อความ	ระดับความคิดเห็น				
	เห็นด้วยมากที่สุด (5)	เห็นด้วยมาก (4)	เห็นด้วยปานกลาง(3)	ไม่เห็นด้วยมาก /เห็นด้วยน้อย (2)	ไม่เห็นด้วยมากที่สุด/เห็นด้วยน้อยที่สุด (1)
การซื้อของผ่านเว็บไซต์หรือแอปพลิเคชัน(ออนไลน์)สะดวกและประหยัดเวลามากกว่าการไปซื้อเอง					
การสั่งอาหารผ่านเว็บไซต์หรือแอปพลิเคชัน(ออนไลน์)สะดวกและประหยัดเวลามากกว่าการไปซื้อเอง					
ฉันซื้อของออนไลน์เป็นประจำอยู่แล้ว					
ฉันมีโทรศัพท์ คอมพิวเตอร์ อินเทอร์เน็ต ที่ทำให้เข้าถึงการสั่งอาหารออนไลน์					
ฉันคิดว่า...					
เพื่อน ครอบครัว คนรอบข้างส่วนใหญ่สั่งอาหารออนไลน์ทำให้อยากสั่ง					
คำแนะนำของครอบครัวและเพื่อนทำให้อยากสั่ง					
โฆษณาประชาสัมพันธ์ของการสั่งอาหารออนไลน์ทำให้อยากสั่ง					
รีวิวจากคนที่สั่งอาหารออนไลน์ใน Social media และปากต่อปาก ทำให้อยากสั่ง					
อาหารที่ได้รับจะตรงตามที่สั่ง สภาพครบถ้วน รสชาติอร่อย					
การสั่งอาหารรวดเร็ว ตรงเวลา คนส่งบริการดี					
การสั่งอาหารออนไลน์ผ่านเว็บไซต์และแอปพลิเคชันมีขั้นตอนไม่มาก เข้าใจง่าย ทำง่าย					
ร้านอาหารในแอปพลิเคชันและเว็บไซต์ครอบคลุมอาหารหลากหลายประเภท					
แอปพลิเคชันและเว็บไซต์มีข้อมูลและรีวิวของร้านอาหารและอาหารครบถ้วน					
ราคาของอาหารและค่าบริการการส่ง สมเหตุสมผลที่รับได้					
โปรโมชั่นและการลดราคาทำให้ฉันสนใจสั่ง					
ระบบการชำระเงินปลอดภัยและมีความน่าเชื่อถือ					
ผู้ให้บริการมีระบบรักษาความปลอดภัยที่ดีป้องกันข้อมูลส่วนตัวไม่ให้รั่วไหลได้					

ส่วนที่ 3: ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

1. เพศ

- ชาย
- หญิง

2. อายุ :

3. ระดับการศึกษา

- ประถมศึกษา
- มัธยมศึกษา
- ปวช./ปวส./ปวท./อนุปริญญา
- ปริญญาตรี
- สูงกว่าปริญญาตรี
- อื่นๆ(ระบุ).....

4. อาชีพ

- รับราชการ / รัฐวิสาหกิจ
- พนักงานบริษัทเอกชน
- ค้าขาย / ธุรกิจส่วนตัว
- รับจ้างทั่วไป
- นักเรียน / นักศึกษา
- พ่อบ้าน / แม่บ้าน
- อื่นๆ(ระบุ).....

5. รายได้เฉลี่ยต่อเดือนของท่าน (ให้ผู้ตอบแบบสอบถามลองประมาณรายได้จากทุกแหล่งในเดือนที่แล้ว)

- น้อยกว่า 15,000 บาท
- 15,000 - 30,000 บาท
- 30,001 - 45,000 บาท
- 45,001 - 60,000 บาท
- 60,001 - 75,000 บาท
- มากกว่า 75,001 บาท

6. ท่านพักอาศัยอยู่กับครอบครัวหรือออกมาอยู่เอง

- อยู่กับครอบครัว
- อยู่หอ คอนโด อพาร์ทเมนท์ เอง

7. จำนวนผู้พักอาศัยตามข้อ6. (รวมตัวเอง) :

8. พฤติวิธีไหนในการซื้ออาหารมากิน

- ไปซื้อเองที่ตลาด Supermarket
- สั่งผ่านโทรศัพท์
- สั่งอาหารออนไลน์ผ่านเว็บไซต์, แอปพลิเคชัน
- อื่นๆ(ระบุ).....

9. พฤติที่บ้านหรือท่านทำอาหารทานเองหรือซื้อทานเป็นส่วนใหญ่ :

- ส่วนใหญ่ทำอาหารทานเอง
- ส่วนใหญ่ซื้ออาหารข้างนอกทาน