FACTORS INFLUENCING PURCHASING BEHAVIOR OF MOBILE FOOD ORDERING APPLICATION'S CONSUMERS IN BANGKOK AND METROPOLITAN AREAS

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ABSTRACT

Nowadays, mobile food ordering business is dramatically growing in Thailand where people highly spend time on the internet via many smart gadgets. With the changes in urban consumer's lifestyle and ongoing traffic issues, the food ordering services by mobile applications are increasingly popular among restaurants business in Bangkok and Metropolitan areas in Thailand. Therefore, study of factors influencing purchasing behavior of customers towards mobile food ordering might help restaurants to better satisfy customers and used as guidelines to improve their marketing strategy's performances in the future. This study used the questionnaire to collect data from 100 mobile food ordering application's consumer who live in Bangkok and metropolitan areas. Data was analyzed by using demographic statistics and tested the hypotheses by chi-square (X^2- test), and Pearson correlation analysis.

The research found that majority of respondents were female (74.0%), age between 26 - 35 years old (48.0%), single (71.0%) which mostly were employee of private company (53.0%) and had income more than 65,000 THB per month (33.0%). Hypothesis testing revealed that customers from different demographic profiles are likely to have different purchasing behavior towards mobile food ordering application. Also, this study found partial effects of online communication channels and online sales promotions on the purchasing behavior of mobile food ordering application's consumers, at significant level of 0.05.

Keywords: Mobile food ordering application, Consumer purchase behavior, Online communication channels, Online sale promotions

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INTRODUCTION

Thailand is the top country of the world which is highly spending time on the internet and mobile internet per day according to the Digital 2018 global overview is showily published as Thais are recorded to spend the most time on the internet last year averagely at 9.38 hours a day and the time is averagely spent on mobile internet at 4.56 hours, accordingly, internet is the part of technology to be affected the daily life. (Leesa-nguansuk, 2018).

Internet also has expanded the e-commerce industries in a country such as Thailand. In Thailand, there are 82.4% internet users and 79% mobile internet users comparing to the total population. The percentage of mobile internet users has been growing at least 11% year to year (EcommerceIQ, 2018). The total number of social media users accessing via mobile is 46 million. Mobile phones and the internet are to be a part of social living; therefore, there are many businesses using its to contribute their products or services.

Online food ordering business is one business which is popular in the downtown areas. Mobile food ordering application is the key to solve current problems such as a long queue, waiting time, and traveling to restaurants. Using this application, the customers do not need to go to the restaurant by themselves, on the other hand they can order the dishes through mobile phones anywhere(Fan, 2014). A few well known mobile food ordering applications that are currently providing a service, e.g. GrabFood, Foodpanda, Line Man, and Wongnai, etc (Sakulrattana, 2015). Getfood, a newcomer, who is one of the fastest-growing companies is currently operating in Thailand and popular in Thailand since early of 2019. A business environment is going to be highly competitive and high business value; thus, KResearch estimates the entire food delivery business in 2019 will amount to THB33-35 billion, up 14 percent from 2018 (KasikornResearch, 2019).

Regarding the expansion of business and mobile users which can be seen the purchasing behavior of consumers have been changing, therefore, research will be studied in purchase behavior of consumers who are using mobile food ordering applications and what factors are influencing purchasing behavior of customers who have used the following applications:

Company	Application
Grab (Thailand)	Grabfood
GET (Thailand)	Getfood
Food panda (Thailand)	Food panda
Wongnai media Co.,Ltd.	Wongnai
Line company (Thailand)	Line Man

Table 1.1 Mobile food ordering application company in Thailand
Sources: Smart SME/Bangkok Bank SME/www.smartsme.co.th/content/223295

Based on the aforementioned, this study aims to test whether demographic profiles of consumers, online communication channels and online sale promotions are affected on the purchasing behavior of mobile food ordering application's consumers. Therefore, this study proposed three hypotheses as follows:

H1: Demographic profile will have an effect on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.
H2: Online communication channels will have an effect on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.
H3: Online sale promotions will have an effect on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

Investigating constructs

This study addresses purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas. The proposed factors of demographic profile, Online communication channels and Online sale promotions were used to examine the relationship with purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas. The definitions of key terms in this study are described as follows:

1) Mobile food ordering application: An application on a mobile phone that provides a service such as, manages the orders, collects the money, and delivers the food to consumers of Online platform and service by own vehicles. Otherwise, a company does not produce any food. This study focuses on the 5 major food ordering applications in Bangkok and metropolitan areas which are Grabfood, Getfood, Food panda, Wongnai and Line Man.

2) Consumer purchase behavior: a consumer buying behavior is the total of a consumer's attitudes, preferences, intentions, and decisions regarding the consumer's behavior in the marketplace when purchasing a product or service which can relatively be described as type of food/ restaurant what consumers selected, frequency of usage the food ordering application/ month, frequency of usage/ week, usage time, amount of spending/ purchase and reason for using.

3) Online communication channels: online communication channels are an approach used by a company to disseminate or exchange information. In other words, it is the system through which the messages were sent in order to reach its targets which there are official website, Display ads, Blogs,Social networks (Facebook, Twitter, YouTube), search engines (Google, Bing), Viral clip/ picture or massages and line application.

4) Online sale promotions: Sales promotion are several communications activities that attempt to provide added value or incentives to consumers to stimulate immediate sales. These efforts can attempt to stimulate product interest, trial, or purchase. Examples of devices used in sales promotion include coupons, samples, premiums, point-of-purchase (POP) displays, contests, rebates, and sweepstakes which are based on online channel.

Regarding to purchasing behavior which can be stimulant by Internal and external factors such as gender, age, social status etc. Both factors have influence on decision making of consumers and purchasing behavior. The effect of these internal and external factors on purchasing behavior of mobile food ordering application's consumers are tested in this study.

In conclusion, Online communication channels consist websites, search ads, display ads, email, online communications, blogs, social network, e-WOM, and mobile (Kotler & Killer, 2016) may be useful to build the crash message consistently, building brand image and increasing sales. Marketers must precisely consider the advantages of each communication channels that can reach to the right target audiences for effective

communication, which leads purchasing behavior of mobile food ordering application's consumer.

In terms of online sale promotions. Neha &Manoj (2013) found that offer premium, and contest as significant variables for stimulating consumer purchase decisions. Online sale promotions have included six broad categories of variables known as Games/contests, Premium and Gifts, Sampling (Free trial), E-coupons, Rebates and Tie-ins (promotion). Online sale promotions are widely used as an organizing concept both in planning corporate marketing strategies and formulating implementation plans to achieve specified marketing objectives

Methodology

This study explores factors influencing purchasing behavior of mobile food ordering application's consumers in Bangkok and Metropolitan areas by using a quantitative research method and questionnaire survey (Sakulrattana, 2015).A convenience sampling method was used for collecting the data. Due to the number of population is unknown, the researcher use Taro Yamane table to calculate by the approximately sample size for this study (Poldongnok ,2009). The sample size is calculated based on 95% confidence level and 5% sampling error. However, this study collected data from 384 samples according to a very limited research operation period for the independent study course, the researcher was allowed to collect 100 samples as conducted in previous studies (Udomsukh, 2018).

Data were collected from mobile food ordering application' s consumers in Bangkok and metropolitan areas. The questionnaires were distributed to 120 respondents who use mobile food ordering applications. 100 sets of questionnaires were received, the response rate was 83.33%. The data were normally distributed due to they have -1<skewness<1 and -2<kurtosis<2 (Tabachnick and Fidell, 1997). Tabachnick, B. G., and Fidell, L. S. (2007). Using Multivariate Statistics (5th edition.). New York: Allyn and Bacon. There are two types of statistics were applied for analysis. Descriptive statistics (Percentage, Frequency, Mean, and Standard deviation) were applied to analyze demographic profiles, online communication channels, online sale promotions, and purchase behavior of mobile food ordering application's consumers. Inferential statistic was applied to test the hypotheses demographic profile and Purchasing behavior by using Chi-square test. Online communication channels and Purchasing behavior were tested by using Chi square test and Pearson's correlation. Online sale promotions and Purchasing behavior were tested by using Chi-square test and Pearson's correlation.

Results and Discussion

Data were collected from mobile food ordering application' s consumers in Bangkok and metropolitan areas. The questionnaires were distributed to 120 respondents who use mobile food ordering applications. 100 sets of questionnaires were received, the response rate was 83.33%

In summary, the respondents of this study are mobile food ordering application' s consumers in Bangkok and metropolitan areas. The majority of respondents were female (74.0%) followed by male (26.0%),age were 26 – 35 years old (48.0%), 36 – 55 years old (33.0%) and 16-25 years old (19.0%) .Most respondents were single (71.0%) followed by

married (29.0%), were employee of private company (53.0%) followed by civil servant/Government employee (18.0%) student (17.0%) Business Owner (12.0%).The majorities of respondents had income more than 65,000 THB per month (33.0%) followed 25,001 - 35,000 THB per month (20.0%) 35,001 - 45,000 THB per month (15.0%) less than 15,000 THB per month (12.0%)) 15,001 - 25,000 THB per month (10.0%) and 55,001 -65,000 THB per month (10.0%).

Most respondents agreed that they have known mobile food ordering application from online communication channels and agreed that they have considered using food ordering application from online sale promotions. Therefore, online communication channels and online sale promotions have an effect to purchase behavior of mobile food ordering application's consumer.

The majority of respondents considered to frequently use food ordering application 1-3 times/month (36.0%), followed by less than 1 time/month (29.0%) 4-6 times/month (18.0%) 7-10 times/month (10.0%) and more than 10 times/month (7.0%), considered to use food ordering application's time at 6PM-10PM (50.0%) followed by 10AM-2PM (38.0%) 2PM-6PM (32.0%) 6AM-10AM (8.0%) and 10PM-6AM (6.0%), considered using food ordering application at the Weekend (Sat-Sun) (45.0%) followed by Working Day (Mon-Fri) (43.0%) and Holidays - Long Weekend (12.0%). Most respondents spending money per time on food ordering application are 251-500 THB (41.0%) followed by 101-250 THB (33.0%) 501-750 THB(10.0%) Less than 100 THB (10.0%) and More than 1,000 THB (6.0%), have considered to use the application Grab Food (44.0%) followed by Line Man (20.0%) Get Food (15.0%) Food Panda (11.0%) Other (6.0%) and Wongnai (4.0%). The majority of respondents strongly agreed that there are several reasons to choose mobile food ordering application: offers free delivery, the delivery time is less than 30 minutes, the distance of restaurant is not far from my living area, varieties of food categories and food menus, that offers the tasty food e.g. have food award or recommendation, has easy ordering process, offers multi-payment methods e.g. Cash, Credit card, Line payment, Online banking, Promptpay, and has professional delivery staff. This leads to developing the conceptual framework of the study and the following hypotheses:

H1*: Demographic profile have an effect on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

H2*: Online communication channels have an effect on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

H3*: Online sale promotions have an effect on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

Note: *Partial Support at Significant Level of 0.05

Table 1 Result of Hypothesis 1: Gender on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

Items	Value (χ^2)	df	Sig.
Frequency of Purchase / month	14.881	4	0.005*
Purchase Time: 6AM-10AM	2.603	1	0.107
Purchase Time: 10AM-2PM	0.991	1	0.319
Purchase Time: 2PM-6PM	2.633	1	0.105
Purchase Time: 6PM-10PM	0.630	1	0.427
Purchase Time: 10PM-6AM	10.905	1	0.001*
Purchase Days	1.105	2	0.575
Amount of spending / time	0.506	4	0.973
Application use	2.956	5	0.707

Table 1, demonstrated the relationship between gender and purchasing behavior of mobile food ordering application's consumers that gender was found to have an effect on Frequency of Purchase/month and Purchase Time: 10PM-6AM at significant level .05 ($p < 0.05$).

Table 2 Result of Hypothesis 1: Age on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas

Items	Value (χ^2)	df	Sig.
Frequency of Purchase / month	6.348	8	0.608
Purchase Time: 6AM-10AM	0.254	2	0.881
Purchase Time: 10AM-2PM	0.299	2	0.861
Purchase Time: 2PM-6PM	2.871	2	0.238
Purchase Time: 6PM-10PM	6.682	2	0.035*
Purchase Time: 10PM-6AM	3.785	2	0.151
Purchase Days	1.655	4	0.799
Amount of spending / time	10.219	8	0.250
Application Use	4.686	10	0.911

Table 2, demonstrated the relationship between age and purchasing behavior of mobile food ordering application's consumers that age was found to have effect on Purchase Time: 6PM – 10PM at significant level .05 ($p < 0.05$), on the other hand, there is no relationship between age and others purchasing behavior.

Result of Hypothesis 2: Online communication channels on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas;

Table 3 a. Result of Hypothesis 2: Online communication channels on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas

Item	Own online channels	Social media channels	E-WOM	Mobile channel
Purchase Time: 6AM-10AM	.471	0.027*	0.034*	0.927
Purchase Time: 10AM-2PM	.436	0.645	0.498	0.651
Purchase Time: 2PM-6PM	.284	0.443	0.727	0.146
Purchase Time: 6PM-10PM	.589	0.889	0.449	0.038*
Purchase Time: 10PM-6AM	.698	0.094	0.325	0.349
Purchase Days	.998	0.364	0.836	0.852
Application Use	.786	0.828	0.443	0.854

Table 3a, demonstrated the relationship between online communication channels and purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

Social Media Channels and Purchasing behavior

The finding showed, there is the relationship between Social media channels and Purchase time: 6AM-10AM ($\chi^2 = 41.647$, $p < 0.05$) at Level of Significant $\alpha = 0.05$

E-Word-of-mouth (WOM) Channels and Purchasing behavior
The finding showed, there is relationship between E-Word-of-mouth (WOM) channels and Purchase time: 6AM-10AM ($\chi^2 = 20.969$, $p < 0.05$) at Level of Significant $\alpha = 0.05$
Mobile channels and Purchasing behavior
The finding showed, there is relationship between Mobile channels and Purchase time: 6PM-10PM ($\chi^2 = 20.550$, $p < 0.05$) at level of significant $\alpha = 0.05$

Table 3b. Result of Hypothesis 2: Online communication channels on purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas

Item	Own online channels	Social media channels	E-WOM	Mobile channel
Frequency of Purchase / month	0.013*	0.074	0.036*	0.226
Amount of spending / time	0.187	0.363	0.724	0.266

Table 3b, demonstrated the relationship between online communication channels and purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

Own online channels and Purchasing behavior
The finding showed, there is the relationship between Own online channels and Frequency

of purchase / month ($r = 0.247$, $p < 0.05$) at level of significant $\alpha = 0.05$
E-Word-of-mouth (WOM) Channels and Purchasing behavior
The finding showed, there is relationship between E-Word-of-mouth (WOM) channels and
Frequency of purchase / month ($r = 0.210$, $p < 0.05$) at Level of Significant $\alpha = 0.05$

Table 4 a. Result of Hypothesis 3: Online sale promotions on purchasing behavior of
mobile food ordering application's consumers in Bangkok and metropolitan areas.

Item	Games/ contests	Premiums /gifts	Free samples	Rebates	E- discount coupons	Tie- ins
Purchase Time: 6AM-10AM	0.725	0.840	0.642	0.842	0.314	0.876
Purchase Time: 10AM-2PM	0.902	0.452	0.234	0.396	0.145	0.494
Purchase Time: 2PM-6PM	0.855	0.699	0.472	0.350	0.824	0.296
Purchase Time: 6PM-10PM	0.720	0.612	0.151	0.060	0.825	0.783
Purchase Time: 10PM-6AM	0.043*	0.303	0.803	0.122	0.237	0.052
Purchase Days	0.526	0.770	0.532	0.711	0.290	0.977
Application Use	0.395	0.356	0.658	0.700	0.908	0.766

Table 4a, demonstrated the relationship between online sale promotions and purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

Offering games/contests and Purchasing behavior
demonstrated that there is a relationship between offering games/contests and Purchase
Time: 10PM-6AM ($\chi^2 = 9.870$, $p < 0.05$) at Level of Significant $\alpha = 0.05$.

Table 4 b. Result of Hypothesis 3: Online sale promotions on purchasing behavior of
mobile food ordering application's consumers in Bangkok and metropolitan areas.

Item	Games/ contests	Premiums /gifts	Free samples	Rebates	E- discount coupons	Tie- ins
Frequency of Purchase / month	0.024*	0.002*	0.002*	0.000*	0.009*	0.001*
Amount of spending / time	0.228	0.892	0.789	0.522	0.954	0.807

Table 4b, demonstrated the relationship between online sale promotions and purchasing behavior of mobile food ordering application's consumers in Bangkok and metropolitan areas.

Offering games/contests and Purchasing behavior
demonstrated that there is a relationship between Offering games/contests and Frequency of purchase / month (r = 0.226, p < 0.05) at Level of Significant α = 0.05

Premiums/gifts and Purchasing behavior
demonstrated that there is a relationship between Premiums/gift and Frequency of purchase/ month (r = 0.302, p < 0.05) at Level of Significant α = 0.05.

Free sample and Purchasing behavior
, demonstrated that there is a relationship between Free sample and Frequency of purchase / month (r = 0.312, p < 0.05) at Level of Significant α = 0.05

Rebates and Purchasing behavior
demonstrated that there is a relationship between Rebates and Frequency of purchase / month (r = 0.387, p < 0.05) at Level of Significant α = 0.05.

E-discount Coupons and Purchasing behavior
demonstrated that there is a relationship between E-discount coupons and Frequency of purchase / month (r = 0.262, p < 0.05) at Level of Significant α = 0.05.

Tie-in and Purchasing behavior
demonstrated that there is no relationship between Tie-in and Purchasing behavior at Level of Significant α = 0.05.

Implications of the Study
1. To increase customers to know mobile food ordering application
   The majority have known mobile food ordering applications from social media networks that are Facebook, Twitter, and YouTube. These channels can help the company to reach the customer for making customers increasingly know mobile food ordering application.

2. To increase customers to use mobile food ordering frequently
   The majority of respondents tend to use mobile food ordering applications when they have seen viral clips/ pictures or viral messages that the company can use this advantage to increase customers for frequently using mobile food ordering. The company also can combine E-WOM with social media networks to reach customers who are the target.

3. To retain the existing customers and obtain new customers or increase customer experience to use mobile food ordering application

The majority of respondents tend to choose mobile food ordering application who offered free delivery, therefore, company who would like to obtain new customers / retain existing customers have to do the attractive sale promotions such as free delivery, e-discount coupons, etc.

4. To increase amount of spending/time of current customers

One of the most important sale promotions is e-discount coupons that can increase amount of spending/ time of customer which is related to this study, therefore, this sale promotion tool might attract customers to increase amount of purchase per time.

5. One of sale promotions can effect purchasing behavior of mobile food ordering application's consumers is Game and contest that can attract customers who have working on night shift or working at night as Game/contest was significant on purchasing behavior of mobile food ordering application's consumers who used food ordering application at 10 PM – 6 AM.

Limitations and Recommendations for future study

There are several limitations in which the researcher encountered throughout the processes of research conduction. The limitation of the study still leaves gaps in this room for future study;

1. This study collected data from 100 respondents are only 26 males and 74 females

Who are mobile food ordering application's consumers in Bangkok and metropolitan areas in order to have better and more reliable result for data collection. The research should find more males at least to equal with number of females. Further study may extend the sampling frame to other districts in different areas such as Phuket, Pattaya, Konkan and Chiangmai where are the tourist areas.

2. This study can be replicated for further study may increase the sample size that can increase the accuracy and efficiency of the study.

3. Future studies can be surveyed nationwide where services can be provided for more comprehensive and realistic findings.

In conclusion, this result might be useful for mobile food ordering company to improve their marketing and sale strategies to better capture the crash changes of mobile food ordering application market.

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