Technology acceptance and service convenience on repeat purchase decision of food delivery business in Thailand

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Abstract. The purpose of this research is to explore the impact of technology acceptance and service convenience on the repeat purchase decisions of the food delivery business. Data were collected from consumers 400 using food ordering services through mobile application in Thailand. Questionnaires was used as data collecting tool. Descriptive Statistic, Multiple Correlation Analysis and multiple regression analysis were applied to analyst data. The results show that consumers who use food delivery service via mobile application express strong perception on technology acceptance includes benefits of use, ease of use and intention to use. Moreover, there are strong perception on service convenience includes access continuity, transaction convenience, and post-purchase convenience. Technology acceptance in the aspect of perceived benefits of use, ease of use, and the intention of use have positive impact and are related to repeat purchase decisions. Service convenience variables, include access convenience, transaction convenience, and after the purchase convenience also hold positive and strong relation toward repeat purchase decision. It is therefore essential for food delivery business to develop their applications that maximize the ease of use, transaction convenience, and access convenience which will optimize customer satisfaction and enhance repeat purchase decision.

1. Introduction
Repeat purchase decisions are the decision making process of consumers regarding to buy products or services again. This behavior is depended on the satisfaction consumers received and received benefits from that particular product [1]. Repeat purchase decisions can be classified into two patterns: customers are willing to buy repeatedly and customer that want to be part of the word of mouth process as a recommendation, both of which lead to loyalty in consumer products and services [2]. Repeat purchase decision can be determined through various variables such as satisfaction, utilitarian value, etc. [3]. Repeat purchase decisions is what all business thrive for. And this includes food industry. Since today food customer behavior has shifted, business certainly has to adapt [4].

There is no deny that delivery food has become such a huge part of today consumer daily life. Between 2014 – 2018, it is reported that Thailand food delivery business obtained the growth rate of 11% [5]. This is the result of technological development that creates opportunities and brought a change into restaurant businesses. Main market players for Thailand food delivery service include GrabFood, Foodpanda, and...
Lineman. The rapid growth in food delivery demands business to create their own selling points, such as free delivery, fast delivery, as well as many different platforms for customer to access to their services. Technology Acceptance Model (TAM) is a widely accepted theory and has been used as indicator for the success of technology by predicting three factors of technology acceptance, namely; perceived of benefits, ease of use, and behavioral intention [6]. Customer who recognize perceived usefulness and ease of use gain enjoyment through purchasing process, this influence online purchasing intention [7]. With today internet and mobile service, customers who experienced satisfaction exhibited greater level to response to e-retailing and express the repeat behavior [8]. In e-shopping, perceived usefulness impacts customer loyalty [9]. In the same line, customer who perceived benefits from ease of use express royalty attitude [10]. Therefore, the first research hypothesis is purposed as following;

Hypothesis 1: “Technology acceptance is related to repeat purchase decision in food delivery business in Thailand”

Service convenience has been defined as any type of ease that provide in particular service that results time and effort reduction for customer [11]. There are five service attributes that has been widely accepted and played such an important role in enhancing customer satisfaction that lead to royalty and repeat purchase intention, namely; Access Convenience, Search Convenience, Evaluation Convenience, Transaction Convenience, and Post-purchase Convenience [12]. Recent studies has suggested changing behavior as customer is now move to conveniece focus with comfortable lifestyle. Customers have now moved from onsite into online shopping. This lead to the increased demand for home delivery service. Convenience attributes suit with customer who are not able to afford onsite shopping due to their limited time as they tend to spend less time on shopping and try to find the best convenient service [13]. Ordering food online is a dependency on technology in order to shorten the waiting time, provide convenient payment option, and allows operators to deliver food more efficiently in real time. These attribute provides opportunity for business development [14]. The extent of benefit from service convenience is not limbited for just enhance customer satisfaction but strengthen the relationship with customers [15]. And eventually create an impact on consumer behavior as many research studies have claimed that convenience can largely influence customer purchasing behavior. The second research hypothesis is purposed as following;

Hypothesis 2: “Service convenience is related to repeat purchase decision in food delivery business in Thailand”

This research aims to explore the relationship of technology acceptance as well as the effect of service convenience on customers repeat purchase decision of food delivery businesses in Thailand. The research is constructed by identify technology acceptance factors with perceived benefits of using, perceived ease of use, and intention to use. In the same line with five service convenience variables that are applied in this study in order to test each of their relationship on repeat purchase decision, include; Access Convenience, Search Convenience, Evaluation Convenience, Transaction Convenience, and Post-Purchase Convenience. Result of this study can hopefully shade some light to Thai food delivery entrepreneurs on how to enhance their competitive advantage through the improvement of technology acceptance and service convenience.

2. Methodology
This research study was conducted through the use of questionnaires that distributed to customers of food delivery business in Thailand. The population is unquantified. Data were collected from 400 customers by convenience sampling. The sample group are sized by Cochran [16]. Questionaires was used as data
collection tools. All data were collected online. Questionnaires consists of 4 main parts include; General information, Opinions on technology acceptance, Opinion on ease of use the service, Opinion on making a repeat purchase decision. Alpha-Coefficient Method (Cronbach) were applied to test reliability of research tool. The test result of reliability is $0.701 – 0.853$. Descriptive statistics, Correlation Analysis, and Multiple Regression Analysis were applied to test research hypothesizes.

![Research Model](image)

**Figure 1.** Research Model.

### 3. Results

From table 1, The study of relationship and impact of technology acceptance on customers repurchase decision from consumers who ordered food delivery found that each independent variable is related or occurs as multicollinearity, therefore the multicollinearity was tested by using the Variance inflation factor (VIF) value. It appears that the VIF value of the independent variable has value between 1.702 - 2.000 which is less than 10. It can be concluded that the relationship of independent variables does not cause multicollinearity problems [17]. Considering the correlation coefficient between independent variables, technology acceptance in each area, the research found that there is relationship with variables according to the decision to buy repeatedly in statistical significance at the level of 0.05 with the coefficient correlation between 0.488 - 0.559.

| Variables | RP | PU | PE | IU | VIF |
|-----------|----|----|----|----|-----|
| X         | 4.10 | 4.23 | 4.05 | 3.93 |
| S.D.      | 0.54 | 0.50 | 0.55 | 0.65 |
| RP        | 0.544* | 0.559* | 0.488* |
| PU        | 0.606* | 0.551* | 1.702 |
| PE        | 0.638* | 2.000 |
| IU        | 1.816 |

*significant level of 0.05

The results of multiple regression analysis found that the acceptance of technology in the aspect of perceived benefits of using (PU), the perceived ease of use (PE) and the intention to use (IU) have a positive impact on the overall customers repeat purchase decision (RP) with statistical significance at the level of 0.05 (Table 2) and the overall forecasting of repeat purchasing decisions (RP) as follows:

$$RP = 1.168 + 0.308PU + 0.288PE + 0.117IU$$
Table 2. Multiple Regression between technology acceptance and repeat purchase decision.

| Technology Acceptance | Repeat Purchase Decision | t  | p-value |
|-----------------------|--------------------------|----|---------|
|                       | Multiple Regression      |    |         |
| Constant              | 1.168                    | 0.189 | 6.188  | 0.000* |
| Perceived benefits of using | 0.308              | 0.055 | 5.626  | 0.000* |
| Perceived ease of use | 0.288                    | 0.054 | 5.302  | 0.000* |
| Intention to use      | 0.117                    | 0.044 | 2.671  | 0.008* |

F = 84.426   p = 0.000   AdjR²= 0.390

*significant level of 0.05

The study of relationship and effect of perceived ease of use with the customers repeat purchase decision who use food ordering service in the food delivery business found that each independent variables is related or occurs as multicollinearity, therefore the multicollinearity was detected by using VIF values. It appears that the VIF values of independent variables for convenience are between 1.926 - 2.273 (less than 10). It can be concluded that the relationship of independent variables does not cause multicollinearity problems [17]. The correlation coefficient between independent variables, the perceived ease of use correlated with the variables according to the overall repeat purchase decision with statistical significance at the level of 0.05 with the correlation coefficient between 0.538 - 0.689, as shown in Table 3.

Table 3. The relation between service convenience and repeat purchase decision.

| Variables | RP | AC | SC | EC | TC | PC | VIF |
|-----------|----|----|----|----|----|----|-----|
| X         | 4.10| 4.12| 4.15| 4.02| 4.17| 4.13|     |
| S.D.      | 0.54| 0.58| 0.54| 0.58| 0.54| 0.55|     |
| RP        | 0.590*| 0.538*| 0.594*| 0.689*| 0.663*|     |
| AC        | 0.652*| 0.604*| 0.542*| 0.475*| 2.034|     |
| SC        | 0.623*| 0.590*| 0.505*| 2.226|     |
| EC        | 0.544*| 0.473*| 1.938|     |
| TC        | 0.674*| 2.273|     |
| PC        | 1.926|     |     |

*significant level of 0.05

The multiple regression analysis results found that the convenience of using the service in the aspect of search convenience (SC) has positive impact on the overall repeat purchase decision (RP) with statistical significance at the level of 0.05 (as in Table 4) and the prediction equation for repeat purchase decisions. Overall (RP) as follows

\[ RP = 0.356 + 0.177AC - 0.036SC + 0.182EC + 0.298TC + 0.287PC \]
Table 4. Multiple Regression service convenience and repeat purchase decision.

| Service Convenience          | Repeat purchase decision | t     | p-value |
|-----------------------------|--------------------------|-------|---------|
|                             | β                        | Standard Deviation |
| Constant*                   | 0.356                    | 0.155 | 2.298   | 0.022   |
| Access Convenience          | 0.177                    | 0.041 | 4.267   | 0.000*  |
| Search Convenience          | -0.036                   | 0.046 | -0.784  | 0.434   |
| Evaluation Convenience      | 0.182                    | 0.040 | 4.542   | 0.000*  |
| Transaction Convenience     | 0.298                    | 0.047 | 6.390   | 0.000*  |
| Post-purchase Convenience   | 0.287                    | 0.042 | 6.772   | 0.000*  |
| F = 125.098                 | p = 0.000                | AdjR² = 0.614 |

*significant level of 0.05

4. Conclusion

Technology acceptance has a positive impact on overall repeat purchase decisions, as using the application allows customer to access the information they need at ease. Using application fasten consumers purchasing process. This aligns previous study which claimed that the perceived benefits that represent the acceptance and intention to use the technology affects the use of the service because most consumers prioritize convenience [6]. With the technology advancement, online purchasing become very convenient with wide range of product with ease for assessment. The intention is a motivation factor that influences behavior and is an indicator of a person’s attempt to act. The more determined the person is, the more likely that it will turn into behavior.

Perceived ease of use has a positive impact on the overall repeat purchase decision. Due to the fact that consumers can use the application to order food that is available in all locations as well as use the application in rush hours. Customer therefore be motivated to use the application to place order even more often. This result coordinated with the idea proposed by Saengthongchai [18] who suggested that the convenience of access is a convenient tool for consumers to quickly access products and services by themselves. This access may occur via telephone, computers, online media, or other methods. Access convenience is extremely important in facilitating trade. If consumers cannot contact the merchant, there will not be an opportunity for purchase. In the same line with the concept of Sibunpheng [6] which explained that the speed and convenience for consumer to get to product combined with timely delivery are one of the most important factor affecting satisfaction, loyalty and willingness to repeat their purchase.

5. Recommendations

As the result of the research has found that technology acceptance is related to repeat purchase decision. Within the development process of delivery platform for food business entrepreneurs, all aspects related to technology acceptance includes perceived benefit of using, perceived ease of use as well as intention to use play such an important role in enhancing repeat purchase decision. Therefore, it is recommended for food business entrepreneur to make sure that the delivery platform that they use are friendly and able to communicate the benefit to users since the intention to use already exist in the customers. Few features that can influence this repeat purchase decision such as easy to use interface, clear image, and customizable menu. Service convenience also play a dominant part to stimulate repeat purchase behavior, based on this research among key service convenience features, search convenience shows strong relationship towards customer willing for repeat their purchasing. Customer therefore will be more
responding as they realize that the delivery platform provides an ease for search and compare the price they need to spend.

References

[1] Kotler P and Armstrong G 2016 Principles of Marketing. Global Edition, 16th ed. Pearson
[2] Moriuchi E and Takahashi I 2016 Satisfaction trust and loyalty of repeat online consumer within the Japanese online supermarket trade *Australas. Mark. J.* 24 146-155
[3] Roy S K, Lassar W M, and Shekhar V 2016 Convenience and satisfaction: mediation of fairness and quality *Serv. Ind. J.* 36 5-6 239-260
[4] Nutchanan K, Piyapitakbun T, Sarachot P, Naksompan T, Murnpho S, and Satongkoem T 2019 Factors affecting consumers in making decisions in using food delivery service *SAU J. Soc. Sci. Humanit.* 3 2 44-53
[5] Sibunpheng P 2019 Factors affecting of behavior of customers living in Bangkok in ordering food via an online application, *GSJ. SSRU.* 12 2 59-70
[6] Ma W W K, Andersson R, and Streith K O 2005 Examining user acceptance of computer technology: An Empirical study of student teachers, *J. Comput. Assist. Learn.* 21 6 387-395
[7] Chiu C M, Chang C C, Cheng H L, and Fang Y H 2009 Determinants of customer repurchase intention in online shopping *Online Inf. Rev.* 33 4 761-784
[8] Shih H P 2004 An empirical study on user acceptance of e-shopping on the web *Inf. Manag. J.* 41 351-368
[9] Hsu M H, Chang C M, and Chuang L W 2015 Understanding the determinants of online repeat purchase intention and moderating role of habit: The case of online group-buying in Taiwan *J. Inf. Manag.* 35 1 45-56
[10] Olson J R and Boyer K K 2005 Internet ticketing in a not-for-profit, service organization: building customer loyalty *Int. J. Oper. Prod. Manag.* 25 1 74-92
[11] Brown Lew G 1990 Convenience in services marketing *J. Serv. Mark.* 4 53–59
[12] Berry L, Seiders K, and Grewal D 2002 Understanding Service Convenience *J. Mark.* 66 3 1-17
[13] Seiders K B, Leonard L, and Gresham L 2000 Attention, retailers! How convenient is your convenience strategy? *MIT Sloan Manag. Rev.* 41 3 79-89
[14] Falcone R, Viola J J, and Reinhold D J 2015 U.S. Patent Application No. 14/036 132
[15] Garver M S, and Gagnon G B 2002 Seven keys to improving customer satisfaction programs *Bus. Horiz.* 45 5 35-42
[16] Cochran W G 1977 Sampling Techniques 3rd ed. John Wiley & Sons New York
[17] Black K 2006 Business statistics for contemporary decision marking 4th ed. USA: John Wiley & Sons, 585
[18] Saengthongchai S, and Tai Fah Pool T 2019 The influence of marketing mix factors on Thai digital native’s decision behavior towards food delivery applications in Bangkok *J. Pr. Adv.* 12 1 13-31