

## Exploratory Studies on Online Grocery Shopping

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**Abstract.** Grocery shopping has been regarded as stressful as a chore that most people's engage it daily. Meanwhile it counterparts the online shopping has somehow or rather are gaining popularity. But consumer uptake on the online grocery service has been slower than anticipated. There were some aspects and factors that need to be looked into by the online grocer in order for them to take the opportunity of the underserved online grocery shopping in Malaysia. This study examines the perceptions and preferences of Malaysian consumer toward this online grocery shopping (OGS). It examines the time availability and convenience of OGS. Consumers who have experience in online food retail, particularly online grocery shopping and those who have used internet to purchase product or services were the targeted sample. The study took consideration of the ethnic breakdown in Malaysia consisted the three main races – Malay, Chinese and Indian with a ratio of 50:40:10. Data were gathered through a self-administered questionnaire. Result shows that Malaysian consumers were concerned with the time availability to navigate the online pages. The online grocers can use the findings of this study to understand and take the opportunity of this interesting online market.

**Keywords:** shopping, online grocery, internet, time availability, convenience

### 1. Introduction

As applied to shopping, time pressure can significantly alter shopping behavior [1]. High versus low levels of time pressure may permit grouping consumers and servicing specific target markets based along this dimension [2]. Impulse may drive the purchase of food products and involve low effort in searching and processing information [3]. Specifically, limited amounts of time may influence food purchasing behavior [4]. There is a relationship between consumer's perception of time pressure and the importance of time saving [5]. Time-pressured shoppers are found to strive for efficiency [1]. In retail grocery shopping, there is a relationship between the need for closure and perceived time pressure in retail grocery shopping [2]. When facing time pressure, confidence in products and convenience play important roles in the buying decision [6]. The ability of consumer to carry out transaction at anytime of each day was an advantage when compared to physical shopping [7];[8].

Online stores operate 24 hours a day and seven days a week. In fact, unlike the traditional shopping environment, consumers can enjoy window-shopping on the internet without the pressure to purchase. Another important factor is the hassle-free experience of shopping online. Consumers do not need to go through the several processes that are unavoidable in physical shopping, such as dressing up, travelling, parking the car, waiting and carrying [9]. By buying their regular weekly repeat items such as groceries from the internet, busy consumers will have more opportunity and time to shop for specialty items at the traditional supermarket [10]; [11]. Time starvation is also a significant predictor of online shopping [12]. Consumers with little discretionary time, including those who work long hours and those with a number of obligations, tend to have little time to research and buy product in traditional stores [13]. As a result, those

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consumers tend to browse online to research and shop their desired products via online [12]. Internet shopping was viewed as saving more time than traditional modes of shopping [14].

## 2. Methodology

For the purpose of this study, quota sampling was used to access the related information by using the instrument developed by the researcher. Quota sampling was employed to ensure that certain characteristics of the Malaysian population sample were well represented [15]. Brymen and Bell stated that quota sampling has been used intensively in marketing research and also political opinion polling [16]. By using the sampling, researcher is able to produce sample that reflects the proportion of people in different categories of basic demographic profiling. In this study, the sampling frame targeted an equal distribution of the sexes from the three major ethnic groups in the ratio of 50:40:10 (percentage of Malays: Chinese: Indian and other races)

In line with the argument and consistent with the standard given by Krejcie and Morgan, 600 questionnaire were distributed and sample size for this study was set at a minimum of 234 respondents [17], which was considered large enough for vigorous statistical analysis [17]. With the total expected respondent to participate in this study, quota sampling applies with ratio 50:40:10 of Malay, Chinese and Indian respondents. In this case, Malay respondents should not be less than 117, followed by Chinese respondent must not less than 93 and Indian respondents must at least consist of 23 respondents.

For the test instrument, respondents were asked question about time availability factors. The factors assessed were: time to do online shopping, time limit for online shopping, time to search for information, time for confirmation on ordering process and accuracy of time delivery of the product to consumers. Eight questions were developed based on the previous studies and modification made to suit with the objective of this study. The importance of this section was not only the time available for consumers to do online purchasing. It comprises the length of time taken to browse the internet and also to browse for the appropriate online grocer and its products, the time taken by both consumer and online grocer in ordering confirmation process and also the accuracy of delivery time that need to be measured.

## 3. Data Analysis/Finding

### 3.1. Respondents' Profile

A total of 243 respondents respond, 136 respondents (56%) rarely browse or purchase food products via online. The other 46 respondents (18.9%) never browse or purchase any food product via online, while 32 respondents (13.2%) browse and purchase food products online once a month. Only 29 respondents (11.9%) do frequent browsing and purchasing of food product online weekly. In the case of internet facility, 134 (55.1%) of the respondents answer that they have internet facilities at home while the rest of the respondents of 109 (44.9%) did not have internet facilities at home. This explains the result of shopping at the market place as compared to online shopping. In addition, 93 respondents (38.3%) use internet facilities at their office to browse and purchase food product online and only 12 respondents (4.9%) use the facilities in other places.

### 3.2. Method of Analysis

Descriptive analysis was used to describe data collection in quantitative terms. Then frequency distribution was used to summarize the value of each variable. Other than that, internal reliability assessment was used to analyze consistency among the ratings given by the respondents. The reliability assessment was used for a portion section from overall study where this paper explores the time availability dimension in online grocery shopping. The result for alpha coefficient is 0.741 which is quite reliable for further analysis.

TABLE 1. Alpha Coefficient of Internal Reliability of Online Grocery Shopping Time Availability

Alpha Coefficient	0.741
Number of items	8

Number of cases	243
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### 3.3. Analysis of Overall Result on Time Availability

Time availability factor were important in order for respondents to precede the process of purchasing grocery product via internet. From this result, it indicates that the result was consistent with the previous studies. Then The value of frequency analysis indicate that most of the respondents rank online grocery shopping can be done anytime (m = 3.86). In addition there is no time limit in online grocery shopping (m = 3.81). It showed that most respondents agree online grocery save time as compared to the shopping at the market place. Next, most respondents agree that by using online grocery, the delivery of product follows schedule (Item 3, m=3.37). From 3 items mentioned above, Item 1 and 2 scored near to 4 which indicate that most of the respondents fairly agree with the statement of no time limit in online grocery shopping and it can be done at anytime. In addition, most of them disagree that they have an ample time to do online grocery shopping (Item 6, m=2.60). This in line with the scores gave by most respondents on time that they had to browse online grocer (Item 8, m=2.16). Respondents rate disagree on less time need to browse online products (Item 4, m=2.75). This had been supported by the next item measuring time need to place an order for online grocery product (Item 5, m=2.61) and order confirmation time needed by online grocer (Item 7, m=2.48). From the above results, it can be conclude that most of the respondents had rated between disagree and neither agree nor disagree on the factors involving time availability of the respondents in online grocery shopping.

TABLE 2. Mean Score for Time Availability

No.	Item	N	Mean (M)	Standard deviation (S.D)
1.	Online grocery shopping can be done anytime.	243	3.86	0.69222
2.	There is no time limit in online grocery shopping.	243	3.81	0.67392
3.	Delivery of online grocery product is following the schedule.	243	3.37	0.59753
4.	Browsing online grocery products list need less time.	243	2.75	0.72906
5.	Placing an order take no time at all.	243	2.61	0.66761
6.	I have an ample time to shop online	243	2.60	0.68778
7.	Confirm order from service provider take no time at all.	243	2.48	0.61881
8.	I have time to browse online grocery service provider.	243	2.16	0.92874

### 4. Conclusion/Recommendation

For conclusion, it can be said that most of the respondents disagree that they have enough time to shop online. This was due to the factor that most of the respondents were working and they had less time to purposely browsing for online grocery shopping. On the other hand, most of the respondents agree that online shopping can be done at anytime because there is no time limit in browsing the internet. In contrast with the above statement, most of the respondents disagree on the fact that they have time to search online grocer in the internet. Furthermore, it is noted that most of the respondents' perceived time is not significant factor in searching for the online grocery product.

In addition for browsing the product, most of the respondents disagree that to place a purchase order, it needs less time. This is due to the need of viewing from one page to another page for them to look for the desired products that later need to be included in the purchase order. From the online grocer, they must confirm the purchase order placed by the consumer and most of the respondents said that they neither agree nor disagree with the time take by the online grocer to confirm an order. Nonetheless respondents felt that the delivery of products was not consistent with the delivery schedule promised by the online grocer.

Beside the above notion, time had played an important role not only in delivery schedule of online purchased. The time availability of consumers to search for online grocery shopping information will define their purchase preferences. When too much time needed in searching for online grocer in the Net, it will restrict consumers to proceed to purchase of online products. This may due to the problem of online page

navigation which may take a long waiting time from one page to another page. This was consistent with the responses from most of the respondents which perceived that they agree that there is insufficient time to search for online grocery information. In dealing with online shopping which did not have any time limit; consumers may think that once they submit their purchase order, confirmation will be given by the online grocer immediately. But it does not happen where order confirmation only took place when they were in the office. Thus, consumers' perception on time waiting will affect their decision to purchase groceries online. Therefore, to overcome the problem on consumer waiting time on order confirmation, managers of online grocer should have the initiative to ensure that consumers do not have to wait for too long for the order confirmation or else they will lose customers. Although this may incur additional costs of operation, it would help online grocer to gain more potential customers in the future.

In Malaysia, food retailing has always been a very competitive business, and in recent years traditional supermarkets are constantly improving the value provided to consumers. To be competitive retailers, they should offer frequent discount prices, high service levels and long operational hours in order to aggressively fight for customer loyalty. The online grocers need to improve their marketing mix and increase their efficiency in providing similar retail shopping experience. As such, the average consumer in Malaysia may not have a good reason to go for grocery shopping online. On top of that, the supermarkets are also gaining market share and making the food business a war zone for new entrants, even on the internet. However, by offering customers superior responsiveness and service, online grocery retailers can build brand equity, generating repeat business and this will result in market penetration in this industry. Another way to gain consumer acceptance is by going into partnership or alliances with the traditional supermarkets. This would lead to mutual benefit with reduced risks.

All in all, future study can extend the study on other elements of online grocery retailing to prove the exact reason for online shopping convenience. Understanding the consumer needs in turn will help them to position their services and be more competitive in this rapid growth of food retail industry.

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## 6. References

- [1] R. Shannon, and R. Mandhachitara, "Casual path modeling of grocery shopping in hypermarkets", *Journal of Product and Brand Management*, vol.17 no.5, 2008, pp 327-340.
- [2] P. V. Kenhove, and K. D. Wulf, "Income and time pressure: a person-situation grocery retail typology", *International Review of Retail, Distribution and Consumer Research*, vol. 10 no. 2, 2000, pp. 149-166.
- [3] R.P. Bagozzi, J.A. Rosa, K.S. Celly, and F. C. Coronal, *Marketing Management*, Prentice-Hall, Englewood Cliffs, NJ. 1998
- [4] J.K. Binkley, "The effect of demographic, economic and nutrition factors on the frequency of food away from home", *Journal of Consumer Affairs*, vol. 40, no. 2, 2006, pp. 372-392.
- [5] L.L. Berry, K. Seiders, and D. Grewal, "Understanding service convenience", *Journal of Marketing*, vol. 66 no. 3, 2002, pp 1-17
- [6] B. Kidwel, and R. Jewel, "An examination of perceived behavioral control: internal and external influences on intention." *Journal of Psychology and Marketing*, vol. 20 no. 7, 2003, pp 625-640.
- [7] K.H. Cheah, *Issues Related to Internet Shopping: An Ethnic Comparison*, Unpublished MBA Dissertation, University of Malaya, Kuala Lumpur, 2001
- [8] J. Strauss, and R. Frost, *E-Marketing*, 2nd ed., Prentice-Hall, Upper Saddle River, New Jersey, 1999
- [9] T. Salste, *The Internet as a Mode of Non-Store Shopping*, Seminar study for marketing at the Helsinki School of Economics and Business Administration in Helsinki, Finland, October 1996

- [10] J. Dornbusch, "Shoppers get online for groceries- at home", Boston Herald, April 1997, p.45.
- [11] T.K. Keh, and E. Shieh, "Online grocery retailing: success factors and potential pitfall", Business Horizon, vol. 44, no. 4, 2001, pp.73-84.
- [12] B. Foucault, and D.A. Scheufele, "Web vs. campus store? Why students buy textbooks online," The Journal of Consumer Marketing, vol.19, no. 5, 2002, pp. 409-423
- [13] S. Bellman, G.L. Lohse, and E.J. Johnson, "Predictor of Online Buying Behavior," Communications of the ACM, vol. 42, no. 12, 1999, pp. 32-38.
- [14] P.L. Alreck and R.B. Settle, "The hurried consumer: Time-saving perceptions of Internet and catalogue shopping," Journal of Database Marketing; vol. 10, no. 1, 2002, pp. 25-35
- [15] W.G.Zikmund, Business research methods, 7th Ed. Ohio: South-Western, 2003
- [16] A. Brymen and E. Bell, Business Research Method 2nd Edition, Oxford University Press, 2007
- [17] R. Krejcie and D. Morgan, "Determining sample size for research activities," Educational and Psychological Measurement, 30, 1970, pp. 607-610.