

CONSUMERS' INTENTION TO USE E-GROCERY IN KLANG VALLEY, MALAYSIA

Phuah Kit Teng, PhD

Senior Lecturer

Faculty of Business, Communication and Law

INTI International University

Bandar Baru Nilai,

71800 Nilai, Negeri Sembilan, Malaysia

kitteng.phuah@newinti.edu.my

Lee Gaik Kwan

Administration and Facilities Management

INTI International College Subang

3, Jalan SS 15/8, SS 15,

47500 Subang Jaya, Selangor, Malaysia

gaikkwan.lee@newinti.edu.my

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 gain popularity. However, 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 retailer grocery in order for them to take the opportunity of the underserved online grocery shopping in Malaysia. The purpose of this study is to investigate the factors affecting on consumers' intention to use e-grocery in Klang Valley, Malaysia. Convenient sampling was used in this study and 384 respondents were interviewed by using self-administered questionnaires. Descriptive analysis, reliability test and multiple regressions were used to accomplish the objective of this study. The result indicate that delivery risk, subjective norms, perceived quality and perceived ease of use will influence consumers intention to use e-grocery in Klang Valley, Malaysia. By understanding the consumer's intention it will help e-grocery retailers enable to survive and compete in the rivalry retail industries.

Field of Research: *Attitude, e-grocery, intention, Theory of planned behavior*

1. Introduction

1.1 Global Online Grocery Market

E-commerce is a growing phenomenon in recent year and the World Wide Web has become an essential tool for e-business nowadays. Billions of people have used the Internet worldwide and the number will continuously grow. According to Internet Statistics (2016), as at December 2015, there were 3.26 billion Internet users and it was more than forty percent of the global population. Due to the advance in technology, e-commerce has continued its double-digit growth year over year all across world. According to Saleh (2016), more than 80% of the online population has used Internet for online purchasing and more that 50% online shoppers had shopped more than once. Indeed, some of the standardize goods such as books, apparel, mobile phone accessories at all, can considered to be more

successfully sold on the internet if compare to goods such as groceries are still not widely acceptable by online consumers (Grewal et al., 2004).

However, in the grocery industry, change has been more evolutionary than revolutionary. Consumers are growing used to the benefits of online other retails are expecting in grocery as well. Online retailers are successful by leveraging savvy technology to improve the consumer shopping experience and meet consumers' evolving desires. Therefore, in order to develop e-grocery, the grocery retailers are required to identify and determine the aspects affected consumers to e-grocery shopping and the correlation among the online buying experience and the acceptance of method (Hand et al., 2009).

E-commerce has become the central growth opportunity in North American and other countries especially in online grocery industry. For example, giant online Amazon also participated in the online grocery industry and it showed that the increasing of important of this industry (Wang, 2013). According to Nielsen (2015), the analysis on the global e-business and trading survey conducted indicated that one-quarter of global respondents already had experience purchasing e-grocery for home delivery and more than half of the respondents mention that they are ready to go for e-grocery shopping in the future. Due to the rapid growth of technology, online grocery-shopping trend was started in United States and consumers spent an average of \$18 to \$24 billion on e-grocery in 2014. In addition, according to Kantar Retail, there is more growth ahead where E-grocery sales will increase 21.1% annually through 2018 compared to 3.1% for physical supermarkets.

With the new advancement technology, the digital mobile shopping for grocery is now implement in a few countries. For example, Tesco in South Korea started implemented a QR Code or Bar code virtual shopping in subways in 2011 and then continue presented on bus stops and public transport to high traffic places. The picture of supermarket shelves were plastered on subway platform with QR codes and it is convenient and allow commuters to shop for their groceries while waiting for the train and it saves consumers time. According to Ved (2010), the report on online sales in Tesco was increased 130% after launching the QR Code virtual shopping in South Korea. Following by U.K, Sweden, Australia Germany and Singapore are also launching with this QR code virtual shopping. Even though there is an increase in the popularity in e-grocery, online grocery retailer still unable to convince consumers to trust on the product quality and services provided by them was caused to low uptake on the online grocery purchasing (Huang and Oppewal, 2006).

1.2 Malaysia Online Grocery Market

Online grocery retailing or e-Grocery is provided an opportunity for consumers to use internet to purchase the groceries products and e-grocery retailers are involved by selecting and distributing the order goods to consumer. However, e-grocery shopping in Malaysia still at initial phrase. E-grocery market in Malaysia started in the mid of 2000, it pioneered by the e-grocers such as CGdeMart.com; SubangGrocery.com; and PasarBorong Online (Muhammad et al., 2015).

The recent e-grocery stores in Malaysia include Presto, Redtick, Youbeli, Food World, Tesco, BMS Organic and many more. These e-grocery retailers are transporting and delivering goods through Klang Valley areas by van or lorry. Tesco Store (M) Sdn Bhd started introduction of online purchasing in April 2013. However, it further reported that the local e-grocery retailers are encountered challenging situation in the short term of period due to most of the consumers are unaware of the benefit of the e-grocery industry concept.

In Malaysia, even though online shopping is in rise and used as common practice to purchase products through internet, the number of complaints about the transactions is increasing too. The most common complaints such as online buyers receiving goods late or didn't receive at all, online sellers didn't receive

any payment, online buyers receiving goods that are either less valuable than those advertised or significantly different from the original description and failure to disclose relevant information about a product or the terms of sale.

Malaysia is listed among one of the high-risk area of online fraud. For United States based IT security developer SOPHOS ranked Malaysia as sixth globally in terms of cybercrime threat risks, as the total cybercrime bill topped \$300 million (RM1.2 billion) in year 2014. According to Mahmood (2015), there are total of 302 online fraud cases involving losses of RM1.5 million as of May 2015. Furthermore, the number of fraud cases lodged the police reports are expected to continue increase if the online shopper do not take precaution by checking the background on the online seller before transaction of their payment. In addition, social media such as Wechat, Facebook, Pinterest and other online platforms has been used by the scammers to advertise the products by offering the attractive package in order to attract the online shoppers. The police reports recorded there are 3,889 cases on cyber-crimes and internet shopping fraud have caused losses of RM 14.6 million and RM80.2 million respectively in 2012. Furthermore, 49 cases were reported on syndicate used name of local companies for phishing purpose. It estimated caused losses of RM1.86 million to foreign companies from Australia, Greece, Libya and China (Terry Brown, 2012).

The failure of some e-grocery retailers in Malaysia may due to lack of education on the knowledge of e-grocery in order to influence the consumers to change their purchasing practices and go for e-grocery. According to Singh (2011), the most challenging for online grocery business is to persuade more consumers to change their mindset to use e-grocery shopping. Most of consumers are doubtful with e-groceries which enable provided a quality grocery product which meet their expectations and curious on the online grocery retailers on the handling of selection groceries products. Given all the benefits and disadvantages of e-grocery and the investment that goes into it, the question is whether the Malaysian consumers are have the intention to use e-grocery in Malaysia. Hence, the purpose of this study is to investigate the factors influencing consumers' intention to use e-grocery in Klang Valley, Malaysia.

2. Methodology

2.1 Conceptual Framework

Theory of Planned Behavior (TPB) (Ajzen, 1991) is sufficient to adequately explain the relationship between consumers' risk attitude, subjective norm and perceived behavioral control towards the intention to e-grocery. Figure 1 shows the conceptual framework that was used in this study to investigate the factors influencing consumer intention to use e-grocery in Klang Valley, Malaysia. In this study, subjective norm such as family, media, friends or colleagues, NGOs and government measure how social pressure on consumers can motivate them to use or not to use e-grocery. Perceived behavioral control is described as whether the behavior is easy or difficult to perform. For example, how consumer perceived ease of use and perceived quality towards e-grocery might influence them to use e-grocery. It is believe that risk attitude such as product risk, delivery risk and convenient risk will influence consumer intention to use e-grocery. Once the consumers have gathered sufficient information and their learning and understanding about e-grocery have been raised to the desired level, consumers will form either a positive or a negative attitude towards the intent to use grocery online. Intention is the idea or behavior the consumer will carry out such as use or not to use e-grocery.

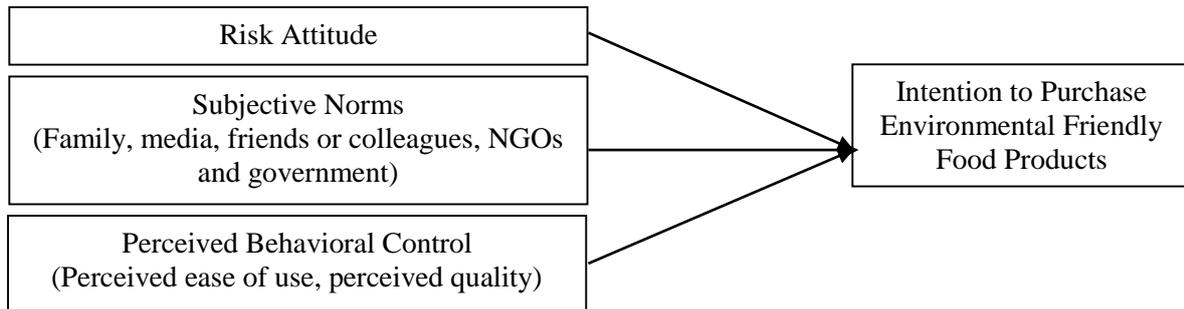


Figure 1: Conceptual framework of TPB applied towards intention to use e-grocery among consumers in the Klang Valley, Malaysia.

2.2 Method of Analysis

This study was conducted in Klang Valley, Malaysia. Convenient sampling methods were used and 384 consumers were interviewed using self-administered questionnaire to collect the information about consumer intention to use e-grocery. Five point likert scales of 1 to 5 (1 represent strongly disagree and 5 represent strongly agree) and dichotomous questions were use in the questionnaire.

Descriptive statistics, reliability test and multiple regression were use to achieve the objective of the study. Descriptive analysis was used to describe the sample in this study. Cronbach alpha method was computed to assess the model for internal consistency. Multiple regression analysis is used to measure the relationship between the factors and consumer intention to use e-grocery. The dependent variable of this study is consumer intention to use e-grocery, whilst the independent variables tested are risk attitudes, subjective norms and the perceived behavioural control. Based on previous studies, the following hypotheses referring to the consumer intention to use e-grocery were proposed.

Hypothesis 1: There is no significant relationship between product risk and consumer intention to use e-grocery shopping.

Hypothesis 2: There is no significant relationship between delivery risk and consumer intention to use e-grocery shopping.

Hypothesis 3: There is no significant relationship between convenient risk and consumer intention to use e-grocery shopping.

Hypothesis 4: There is no significant relationship between subjective norm and consumer intention to use e-grocery shopping.

Hypothesis 5: There is no significant relationship between perceived ease of use and consumer intention to use e-grocery shopping.

Hypothesis 6: There is no significant relationship between perceived quality and consumer intention to use e-grocery shopping.

3. Finding & Discussion

In this study, the Cronbach's Alpha was used to measure the reliability of 36 questions which were used to measure (in Likert scale) consumers attitude, subjective norms, perceived behavioral control and intention. The Cronbach's Alpha value was 0.908 which means that the model is fit for this study.

3.1 Demographic Profile of the Respondents

Table 1 shows the socio-demographic profile of respondents. The demographic profile includes gender, race, age, education level, marital status, income level and household size. The result showed that 66.7 percent of the respondents were females and 33.3 percent were males. Majority of the respondents were Chinese (60.7 percent), followed by Indians (21.1 percent), Malay (17.2 percent) and others (1.0 percent). As can be seen in Table 1, 31.5 percent of respondents were single and 68.5 percent were married.

With regards to age the result showed that most of the respondents were between 25 to 34 years (45.1 percent), followed by 30.7 percent between 35 to 44 year old and only 3.4 percent were below 24 year old. Moreover, majority of the respondents have at least a postgraduate degree such as Master and PhD (66.1 percent). In terms of income distribution, this study found that 2.3 percent respondents earned less than RM 2000, 9.1 percent earned between RM 2001 – RM 3000, 32.8 percent earned RM 3001 – RM 4000, 24.7 percent earn between RM4001 – RM5000, 13.5 percent earn between RM5001 – RM6000 and 17.4 percent had monthly income above RM 6001. As shown in Table 1, majority of the respondents have between 2 to 6 household size (42.7 percent).

Table 1. Socio-demographic profile of respondents (n=384)

Characteristic	Percentage	Characteristic	Percentage
Gender		Education level	
Male	33.3	Secondary	4.4
Female	66.7	Tertiary	29.4
Ethnic (Race)		Higher Tertiary	66.1
Malay	17.2	Income (RM)	
Chinese	60.7	Less than RM2000	2.3
Indian	21.1	RM2001 to RM3000	9.1
Others	1.0	RM3001 to RM4000	32.8
Marital Status		RM4001 to RM5000	24.7
Single	31.5	RM5001 to RM6000	13.5
Married	68.5	RM6001 and above	17.4
Age		Household Size	
Below 24	3.4	Only 1	2.4
25-34	45.1	2 to 4	42.7
35-44	30.7	5 to 6	42.7
45-55	15.6	7 and above	12.2
55 and above	5.2		

3.2 Consumer Habits towards E-Grocery

Table 2 shows the consumer habits towards e-grocery. The table shows that majority of the respondents (67.2%) purchase groceries 1 to 2 times a week, whilst 57 respondents (14.8%) purchase groceries for 3 to 4 times a week. It followed by 48 respondents (12.5%) did not purchase groceries from a retailer during a regular week and only 17 respondents (4.4%) purchase groceries every day and 4 respondents (1%) purchase groceries for 5 to 6 times a week.

From table 2, 58.9% of the respondents never made any grocery purchases online while 41.1% of the respondents have use e-grocery at least once. Majority of respondents 230 (59.9%) tend to buy their groceries from a supermarket store, 113 respondents (29.4%) prefer to purchase through online and stores. However, 28 respondents (7.3%) tend to buy from an online grocery retailer and 13 respondents (3.4%) do not do any grocery shopping. Moreover, 314 respondents (81.8%) intent to purchase instant food or drink in the future. If compared only 203 respondents (52.9%) intent to buy vegetables, fruits and raw ingredients; and 68 (17.7%) respondents are intent to buy and meat and seafood in the future.

Table 2. Consumer Habits towards E-Grocery

Statement	Frequency	Percentage
1. How often do you purchase groceries from a retailer during a regular week?		
1-2 times a week	258	67.2
3-4 times a week	57	14.8
5-6 times a week	4	1.0
Every day	17	4.4
None	48	12.5
2. Where do you tend to buy your groceries from, an online retailer or a supermarket store?		
I buy from an online grocery retailer	28	7.3
I go to a supermarket store	230	59.9
I buy an online grocery retailers and supermarket stores	113	29.4
I do not do any grocery shopping	13	3.4
3. In the last year, how often have you made grocery purchases online?		
0 times	226	58.9
Once in the last 6 months	63	16.4
About once every other month	34	8.9
About once a month	52	13.5
About once a week	8	2.1
More than once a week	1	.3
4. In future, what items you intent to purchase through e-grocery?		
Instant food or drink	314	81.8
Vegetables, fruits and raw ingredients	203	52.9
Meat and seafood	68	17.7

3.3 Multiple Regression Analysis

Multiple regression analysis was conducted to examine the relationship between the factors and consumer intention to use e-grocery. The estimated parameters and the statistical significance levels are shown in Table 3. The multiple regression model with all six predictors produced $R^2 = 0.429$, $F(6,377) = 47.184$, $p = 0.000$, $p\text{-value} < 0.05$. Since the F test is significant, we can conclude that the model is acceptable for this research.

The value of Adjusted R Square is 0.420 indicates that 42% of the variability on the intention of consumer to use e-grocery is explained by product risk, delivery risk, convenient risk, subjective norm,

perceived quality and perceived ease use of online site. The remain 58% is due to other factors. The residual are not correlated since the Durbin Watson statistic is at the acceptance range of 1.5 to 2.5. Collinearity was tested by using tolerance and variance inflation factor (VIF). The results show that the tolerance for all independent variables was more than 0.1 and the value for VIF were less than 10. Therefore, there was no collinearity within the data.

From Table 3, the equation for the regression line is:

$$Y = 1.003 + 0.059 (\text{Product Risk}) - 0.122 (\text{Delivery Risk}) + 0.17 (\text{Convenient Risk}) + 0.385 (\text{Subjective Norms}) + 0.089 (\text{Perceived Quality}) + 0.344 (\text{Ease use of online site})$$

Product risk does not show any significant relationship with consumer intention to use e-grocery since ($p=0.242$) which p-value is more than 0.05. This finding supported by Joana (2013) found that product risk is not significant impact on the online grocery shopping.

As can be seen in Table 3, delivery risk had significant negative regression weights ($p=0.013$; $\beta = -0.122$), indicating customer who have less worry about the delivery were expected to have higher intention to use e-grocery. This findings was supported by Khan et al.,(2015) which she found that non-delivery risk negatively affected the consumers' buying behavior on e-grocery shopping in Mumbai city.

Convenient risk had significant positive regression weight ($p=0.000$; $\beta = 0.17$) indicate that customer who don't think that convenient is a risk were expected to have higher intention to use e-grocery. The finding was similar the research done by Cho and Sagyno (2015) where they indicated that convenience has significant influencing consumers' behavior and it is one of the main key motivator for consumers' adoption on e-grocery shopping.

Moreover, subjective norm had significant positive regression weight ($p=0.000$; $\beta = 0.385$) implies that consumer who is influence by family, media, friends, colleagues, NGOs and government have higher intention to use e-grocery. This finding was consistent and supported by Hansen et al.,(2004)on the researchers studied has reported that the effect of subjective norms on consumer intention to use e-grocery may have positive relationship between subjective norms and intention to use e-grocery.

Perceived quality ($p=0.046$) and perceived ease use of online site ($p=0.000$) had significant relationship with consumer intention since p-value is less than 0.05. The Beta for perceived quality is 0.089 that indicates that consumer who think that e-grocery provides quality products and information have higher intention to use e-grocery. The consumer who thinks that it is easy for them to use e-grocery to purchase their grocery had higher intention to use e-grocery ($\beta = 0.344$). The study is similar with the research done by Sun et al., (2014) where they found that the easiness of use and quality of website have significant influence consumers' adoption on e-grocery shopping.

Table 3. Consumer Intention to Use E-Grocery

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.003	0.217		4.629	0.000		
Products Risk	0.059	0.05	0.077	1.172	0.242	0.349	2.864
Delivery Risk	-0.122	0.049	-0.16	-2.506	0.013**	0.372	2.691
Convenient Risk	0.17	0.042	0.184	4.093	0.000***	0.753	1.328
Subjective Norm	0.385	0.045	0.377	8.597	0.000***	0.787	1.27
Perceived Quality	0.089	0.044	0.096	1.998	0.046**	0.657	1.523

Perceived Ease of Use	0.344	0.06	0.265	5.717	0.000***	0.704	1.421
R Square	0.429						
Adjusted R Square	0.420						
Durbin Watson	1.977						
F-Test	47.184***						

(***Statistically significant at 0.01 level; ** statistically significant at 0.05 level)

4. Conclusion and Future Recommendation

In Malaysia, the concept of online grocery shopping being relatively new phenomenon and the majority consumer has not been experienced to use e-grocery although they are aware of the e-grocery shopping. The survey shows that there is a high level of using Internet and availability of Internet access by the consumers to buy groceries online had provide a further support for the relevance of e-grocery shopping in Klang Valley, Malaysia. Although the majority of the respondents have not experienced e-grocery shopping, most of them had experienced in terms of convenience and time saving through online purchasing for other products and services. As conclusion in this research that applying Theory of Planned Behavior model is supportive to understand consumers' intention to use e-grocery and ultimately predict the possible behavior the consumers in Klang Valley, Malaysia.

As in this study revealed that delivery risk and quality risk are one of the importance factors affect consumers to use e-grocery. Hence, in regards to quality risk, e-grocery retailers can imply a policy for returning or replacing unsatisfactory goods and providing a small complimentary gift to consumers for caused this inconvenience. In addition, it also recommended to e-grocery retailers to offer warranty coverage to e-shopping consumers when the products are failed to deliver on time. Hence, this is supported by Moshref et al., (2012) reported consumers were worried of products non-delivery through online shopping and suggested e-retailer should offer warranty to consumers in order to ensure the goods are definitely to be delivered to consumer.

Besides, e-retailer may also provide waive of delivery fee charges or certain discount rates if goods are not delivery on time. Hence, the consumers will feel more secure and confidence to purchase online grocery from the trustworthy e-grocery retails. Through this WOW e-grocery shopping experience, it will be increasing the numbers of consumers purchasing e-grocery through word-of-mouth influencing by friends and family members who have experience on using e-grocery shopping.

More campaigns and advertisements to be held in order to create awareness and to educate consumers on this convenient services of online grocery shopping. With the current advance technology, it is encouraging consumers to use this technology to ease their groceries purchasing. Furthermore, the e-grocery website design should maintain simple, easy to access and user friendly in order to ease to use for those consumers who are non-computer savvy.

By understanding the consumer's intention it will help e-grocery retailers enable to survive and compete in the rivalry retail industries. Hence, it would helpful to the e-grocery retailers' survivors and newcomers to find the strategies for the success in this sector and learn from the mistakes of the past so that they can increase this online sector in the future.

References

- Ajzen, I., (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50 (2), 179-211.
- Cho, Y.C. & Sagynov, E., (2015). Exploring Factors That Affect Usefulness, Ease Of Use, Trust, And Purchase Intention In The Online Environment. *International Journal of Management & Information Systems*, 19(1), 21-36.
- Grewal, D., Iyer, G.R., & Levy, M., (2004). Internet retailing: enablers, limiters and market consequence. *Journal of Business Research*, 57(7), 703-713.
- Hansen, T., Moller, J. J., & Stubbe, S. H., (2004). Predicting online grocery buying intention: a comparison of the theory of reasoned action and the theory of planned behavior. *International Journal Of Information Management*, 24, 539-550.
- Hand. C., Riley, F.D., Harris, P. Singh, J., & Rettie, R., (2009). Online grocery shopping: the influence of situational factors. *European Journal of Marketing*, 43(9/10), 1205-1219.
- Huang, Y., & Oppewal, H., (2006). Why consumers hesitate to shop online: An experimental choice analysis of grocery shopping and the role of delivery fees. *International Journal of Retail & Distribution Management*, 34 (4/5), 334-353.
- Internet Stats, (2016). Internet stats & facts for 2016. [Online] Available at <https://hostingfacts.com/internet-facts-stats-2016/> [Accessed 24 August 2016]
- Khan, S. A., Liang, Y., & Shahzad, S., (2015). An Empirical Study of Perceived Factor Affecting Customer Satisfaction to re-purchase Intention in Online Store in China. *Journal of Service Science and Management*, 8(3), 291.
- Mahmood, M. (2015). Online shopping fraud on the rise. [Online] Available at: <http://www.nst.com.my/news/2015/09/online-shopping-fraud-rise>. [Accessed 26 August 2017]
- Moshref, J.M.H., Dolatabadi, H. R., Nourbakhsh, M., Poursaedi, A. & Asadollahi , A. R. (2012). An Analysis of Factor Affecting on Online Shopping Behavior of Consumers, *International Journal of Marketing Studies*, 4(5), 81-91.
- Muhammad, N.S., Haslinda, S. & Sofiah, A.R., (2015). Buying groceries online: the influences of electronic service quality (eServQual) and situational factors. *Procedia Economics and Finance*, 37, 379-385.
- Nielsen E-commerce and the New Retail Survey, (2015). More than half of global consumers are willing to buy groceries online. [Online] Available at: <http://www.nielsen.com/ca/en/press-room/2015/more-than-half-of-global-consumers-are-willing-to-buy-groceries-online.html>. [Accessed 23 August 2017]
- Saleh, K., (2016). How Big is E-commerce Industry. [Online] Available at: <http://www.invespcro.com/blog/how-big-is-ecomme> [Accessed 25 August 2017]
- Singh, K. (2011). Investing BIG in online groceries. *The Edge Malaysia*.

Sun,S., Chen, L., & Huang, H.C., (2014). Social Cognition and the Effect of Product Quality Online. In Proceeding of Pacific Asia Conference on Information Systems. Pacis 2014.

Terry, B., (2012). Most of the cyber-crimes happen through online purchase. [Online] Available at: <http://vsdaily.com/most-of-the-cyber-crimes-happen-through-online-purchases/> [Accessed 26 August 2017]

Ved, A.P., (2010). Are QR Codes and Virtual Stores the Future of Marketing? [Online] Availableat:<http://www.psfk.com/2013/04/shop-for-groceries-from-virtual-displays.html>. [Accessed 27 August 2017]

Wang, Y.Y. (2013). The Antecedents of E-grocery Store Continuance. 19th American Conference on Information Systems, Chicago