

Consumer Acceptance in Emerging Towards Using E-Grocery Shopping: A Systematic Literature Review

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ABSTRACT

Online grocery shopping plays an essential part in today's online market as it is the most rapidly evolving online shopping category. The main purpose of this paper is to review the increasing number of studies on online grocery adoption in this area. Online groceries are used extensively throughout the world, but they are still relatively new in developing nations like Malaysia. Researchers have studied the use of online groceries extensively, but some factors influence their adoption. We retrieved scholarly articles on online grocery adoption published from 2015-2023 through the Scopus and Web of Science (WoS) database. After the screening process, some papers were excluded due to unmatched criteria. Therefore, 61 previous papers were reviewed concerning the adapted theories, methodology, and findings. Therefore, to close the gap, this study's goal is to give an in-depth review of the factors that influence consumers to adopt online grocery shopping through the Technology Acceptance Model (TAM) as a baseline model. This suggests in the future, e-grocery could be an important market for rapid commerce online shopping services. This paper is built upon a systematic literature review method. The significant result of this research will help online grocery service providers plan and increase customer intention to use their products to develop relevant strategies.

Keywords: Consumer acceptance, behavioral intention, online grocery, e-grocery, emerging economies.

INTRODUCTION

In recent years, the Internet has become a mandatory facility for everyone's daily life. People get connected widely among themselves through the usage of the Internet. The Internet has made people change their daily lives. This revolution has also become one of the renowned platforms for people to do online shopping conveniently (Bourlakis, 2008). As stated by Internet World Statistics (2020), when compared to the global population of Internet users in 2000, there are now over 3 billion Internet users worldwide, showing a 577% increase in growth.

Over the past 20 years, e-commerce has completely changed the retail experience and grown to become one of the largest markets for the exchange of goods and services (Zerbini et al., 2022). The Covid-19 pandemic, which began in China in December 2019, and spread to the rest of the world, has increased the likelihood that consumers will change their preferences and behavioural patterns. Consumer behaviour is shifting away from traditional ways as consumer interest in technology and online payment sectors grow (Khoulood, 2020). For instance, switching to internet shopping and selecting different options for delivery and pick-up (Erjavec and Manfreda, 2022). According to Eriksson and Stenius (2022) there was a shift in consumer preferences during this period from traditional markets towards online food buying. Online grocery delivery services, which let customers shop whenever they want and have their groceries delivered right to their door (Kvalsvik, 2022), are predicted to grow quickly, especially in the American and European markets (Kian et al., 2019), and by 2025, they will make up 20% of all market sales in the US (Headrick et al., 2022).

Consumers in Malaysia are showing signs of growth when it comes to Internet shopping. As stated by Simon and Sarah (2019), 80% of Malaysians mostly shop online for goods and services. Malaysia's e-commerce market has grown significantly, making it one of the largest and fastest growing in all of Southeast Asia. The market is projected to grow from \$9.2 billion in 2022 to \$16.6 billion in 2026, representing a 16.1% compound annual growth rate (CAGR) (Dong, 2022). Government initiatives, the rise in the use of mobile internet, and safe online payment methods have all contributed to this growth (Dong, 2022; MDEC, 2022; MCMC, 2018; Roger, 2018).

Online grocery or E-grocery was introduced in the United States (US) in 1980 (Kurnia & Chen, 2003). After that, other countries such as Asia, Europe, and Australia follow this technology (Cosseboom, 2015; Galante, 2013). Bellamy, Kellogg, Richards, and Swart (n.d.) explain online grocery as a worldwide activity these days and most of the time people use it frequently in their everyday lives. Online grocery shopping is growing faster in Western countries since they enjoy using that platform compared to Malaysia. The trend of using E-grocery growing tremendously because they feel that this service is very convenient as well as saves their time especially for those who are in the urban area and having a busy daily routine. The European predicted that the sales will increase from USD 421.9 million in 2020 to USD 546.7 million in 2024, with the expected annual growth rate of 6.7% (Statista, 2021).

Online grocery trend in Malaysia has been introduced in mid-year 2000 by PasarBorong.com, SubangGrocer.com and CGdeMart.com (Payter & Lim, 2001). These companies have provided the services, namely delivery of the goods to the consumer's doorstep within 24 hours that includes products such as fresh meat and fresh seafood. However, due to the lack of the internet connection at that time and the awareness of using e-grocery platform, people tend to use traditional ways to buy their needs at any physical stores in Malaysia. Due to Movement Control (MCO) in 2019, Malaysians are using e-commerce platforms to buy groceries, daily necessities, and food items using delivery services. The demand for specific foods, like fruits, vegetables, meat, seafood, and fish, is constantly rising, so supermarkets and e-commerce sites rely heavily on the supply of fresh food (Boxme, 2021).

In retrospect, the COVID-19 pandemic has essentially given faltering grocers a new lease of life. Due to the Movement Control Order (MCO) since March 2020, the business of grocers has

increased by up to 80% and sales have become stabilized (The Edge, 2020). Besides that, many struggling grocery retailers who have physical stores saw their companies resurrected because of the pandemic (Tan, 2020). He reiterated that the development in grocery trade has shown a positive impact after the MCO was imposed. In addition, to make the statement stronger, 59% of people started online grocery shopping after MCO began as compared to before MCO began, which was only 41% (Vodus Insight, 2020). Due to the fear of contracting the virus outdoors, many people used mobile apps and online businesses to have their weekly groceries delivered to their homes.

According to a report by Digital Consumer of Tomorrow and Here Today (2020), online adoption in Malaysia towards categories of groceries increased with the largest spike of 2.2 times. Online shipment for essentials has become widespread, particularly for groceries. Groceries were the least penetrated online categories but with the arrival of the COVID-19 pandemic from March to May 2021, the grocery segment has its users that make the market popular.

Researchers have an opportunity to conduct research in this area due to the quick-commerce industry's rapid development in the e-grocery sector. Malaysian consumers are still shopping for groceries online, with spending rising by 4.4% to \$158.4 million, despite the removal of COVID-19 lockdowns (Commission Factory, 2023). E-grocery is an essential future market for online shopping services, as indicated by the report and the discussion that has been presented. Researchers and practitioners have to pay greater consideration to this phenomenon.

Based on the findings from another systematic review by Dahlberg (2015), studies on online shopping adoption used models of information technologies like Technology Acceptance Model (TAM), Theory of Planned Behavior, and Unified Theory of Acceptance and Use of Technology (UTAUT) as a theoretical base. The authors' systematic literature review (SLR) was carried out as part of this study to present a thorough summary of previous research. SLR studies have been conducted in the e-grocery field on multiple occasions.

METHODOLOGY

This section discusses the methods for retrieving articles about e-grocery (online grocery). Scopus and Web of Science (WoS) were used to conduct a literature search on e-grocery (online grocery). Several articles related to online grocery acceptance were considered and retrieved using the funneling method. The article search keyword include as "e-grocery" "online grocery" "electronic grocery" "online grocery store" and "digital grocery".

The keyword searches resulted in 131 articles, which were then added to Mendeley for further screening process through the abstract and full text. The selected articles are from the period of 2015-2023 because this was the period when the online grocery phenomenon began, particularly in Malaysia. The articles are then screened for duplications of which, after removing duplicates, only 65 articles are left. The 65 articles are then filtered to ensure that the content was relevant to the aims of the study. The process is done by going through the title of the article, abstract, and full text.

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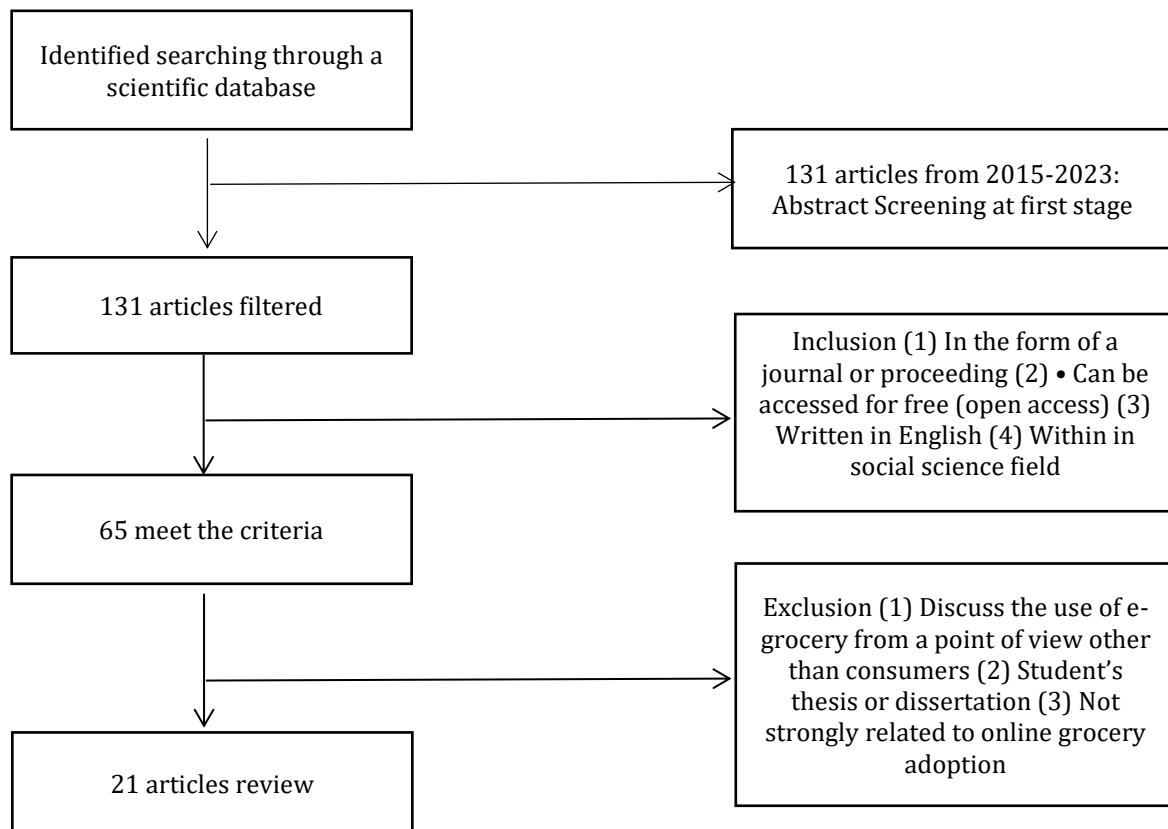


Figure 1: The screening process for literature review on online grocery

ANALYSIS OF THE STUDY

At the end of the screening process, 21 papers were successfully obtained and considered sufficient for final review. The quantitative approach to this study on proximity based on online grocery was dominant. The details of the past studies are summarized and presented in Table 1 below.

Table 1: Sources and number of publications by journal

Sources	Country	Theory	Independent Variables		Mediator	Dependent Variables
Aslam et al. (2017)	Pakistan	Technology Acceptance	Perceived security(ns),	Perceived compatibility	Attitude towards	Intention to use

		Model (TAM)	(sig), Perceived usefulness (sig), Perceived ease of use(ns), Subjective norm (sig)	usage (sig)	
Busu et al. (2018)	Malaysia	Technology Acceptance Model (TAM), Diffusion of Innovation (DOI)	Perceived usefulness (sig), Perceived ease of use(ns), Compatibility (sig), Perceived cost (sig), Additional value(ns), Personal innovativeness(ns), NFC related knowledge(ns), Concern on theft/fraud/		Intention to adopt
Klepek, M. (2018)	Czech Republic	Technology Acceptance Model (TAM)	Perceived usefulness (sig), Perceived ease of use (sig)		Intention to use
Ng and Mei (2019)	Malaysia	Technology Acceptance Model (TAM)	Convenience (sig), Confidential(ns), Social influence (sig)		Perceived usefulness
Driediger, F., & Bhatiasevi, V. (2019)	Thailand	Technology Acceptance Model (TAM)	Perceived usefulness (sig), Perceived ease of use (sig)		Intention to use
Singh, R., & Rosengren, S. (2020).	Thailand	Technology Acceptance Model (TAM), Push-Pull-Mooring	Customer Services(sig) Delivery Product(sig) Price Perception(sig) Technical Issue(sig) Switching Cost(ns) Past Switching(sig) WOM (sig) Alternative Attraction(sig)		Intention
Rantung et al. (2020)	Indonesia	Technology Acceptance Model (TAM)	Perceived usefulness (sig), Perceived ease of use (sig)		Intention to use
Abenoh, N. 'Aini. (2020).	Malaysia	Technology Acceptance Model (TAM)	Perceived usefulness (sig), Perceived ease of use (sig)		Intention to use
Rayesa (2020)	Indonesia	Theory of Planned Behavior (TPB)	Attitude Toward Behavior (sig) Subjective Norm(sig) Perceived Behavior Control(sig)	Purchase Intention	Purchase Behavior
Jefri, R. (2021).	Indonesia	E-Services Quality	Convenience(sig) Customization(sig) Security(sig) Web Appearance(sig)		Repurchase intention
Marina (2022)	Indonesia	Technology Acceptance Model (TAM)	Perceived usefulness (sig), Perceived ease of use (sig) Perceived Risk(sig)		Intention to use

			Social Influence(sig) Visibility(sig) Compatibility(sig)		
Asma Ghenai (2022)	Qatar	Unified theory of acceptance and use of technology 2 (UTAUT 2)	Perceived Expectancy(sig) Effort Expectancy(ns) Social Influence(sig) Facilitating Conditions(sig) Perceived Trust(sig) Perceived Risk(sig) Sensory Simulation(sig) Loss of Perceived Enjoyment(ns)		Adoption
Anshu, K. (2022)	India	Multi Attribute Utility Theory (MAUT)	Convenience(sig) Product Experience(sig) Privacy & Security(sig) Delivery Experience(sig)	Attitude	Repurchase Intention
Gomes, S., & Lopes, J. M. (2022)	Portugal	Technology Acceptance Model (TAM), Expectation Confirmation Model (ECM)	Academic Qualifications(sig) Age(sig) Annual Income Consumer (sig) Behavior towards Food and Beverages(sig) Gender(ns)	Online Grocery Shopping Experience	Intention to Purchase
Khurana (2023)	India	Technology Acceptance Model (TAM), Theory Reasoned Action (TRA)	Perceived Ease of Use(sig) Perceived Usefulness(sig)	Behaviour Intention	Actual Usage
Guroy (2023)	Turkey	Social Impact	Informative Role(sig) Normative Role(sig)		Intention to purchase
Yap (2023)	Malaysia	Technology Acceptance Model (TAM)	Perceived Ease of Use(sig) Perceived Usefulness(sig)		Intention to use
Monoarfa (2023)	Indonesia	Technology Acceptance Model (TAM), Push- Pull-Mooring	Perceived Usefulness(sig) Perceived Ease of Use(sig) Perceived Value(sig) Health Consciousness(sig) Personal Innovativeness(sig)	Mooring	Switching Intention
Musikavanhu, T.B. & Musakuro (2023)	India	Technology Acceptance Model (TAM)	Perceived Usefulness(ns) Perceived Ease of Use(ns) Perceived Risk(ns) Perceived Cost(sig) Perceived Image Barrier(ns)		Behavior Intention to adopt

			Visibility(ns) Social Attractiveness(ns)		
Gaire, B., & Maharjan, S. (2023)	India	Extended of TAM	Perceived Usefulness(ns) Perceived Ease of Use(ns) Perceived Risk(sig) Perceived Enjoyment(sig) Perceived Cost(sig) Subjective Norm(sig)	Attitude	Behavior Intention
Mastana (2023)	Thailand	Technology of Acceptance (TAM)	Perceived Utility(sig) Perceived Ease of Use (sig) Accessibility(sig) Security Perception (sig) Shipment Services(sig)		Intention

Note: Sig=significant, ns= not significant

RESULT AND DISCUSSION

Publication Source and Number of Publications by Journal

This section summarizes the results of a systematic review of 65 e-grocery acceptance based on empirical studies on e-grocery. Table 2 shows the selected articles by the journals. The total number of papers obtained from journals was 54. The majority of articles were published in the *International Journal of Academic Research in Business and Social Sciences*, the *Journal of Retailing and Consumer Services*, and the *International Journal of Business Innovation and Research* while others published one article only.

Table 2: Sources and number of publications by journal

Name of journal	No of publications
Smart Innovation, Systems and Technologies	1
Journal of Public Affairs	1
The Journal of Organizational Management Studies	1
International Journal of Academic Research in Business and Social Sciences	2
Agricultural Social Economic Journal	1
Journal of Food Products Marketing	1
Turkish Journal of Computer and Mathematics Education (TURCOMAT)	1
Journal of Retailing and Consumer Services	2
Procedia Economics and Finance	1
International Review of Retail, Distribution and Consumer Research	1
Progress in Physical Geography	1
Research in Transportation Economics	1
International Journal of Business Innovation and Research	2
Canadian Journal of Agricultural Economics	1
International Journal of Networking and Virtual Organisations	1
Behaviour and Information Technology	1
Uncertain Supply Chain Management	1
Journal of Research in Business, Economics, and Education	1
Journal of Global Business Insights	1
Journal of Business Management	1
Pakistan Business Review	1

Journal of Critical Reviews	1
International Journal of Electronic Marketing and Retailing	1
Encyclopedia of E-Commerce Development, Implementation, and Management	1
International Journal of Economics	1
Management Science Letters	1
Asian Journal of Economics, Business and Accounting	1
Computers in Human Behavior	1
IOSR Journal of Business and Management	1
International Journal of Education and Development using Information and Communication Technology	1
Asia Pacific Journal of Marketing and Logistics	1
Journal of Sociological Research	1
International Journal of Business and Social Science	1
Technological Forecasting and Social Change	1
Asia Pacific Education Review	1
Journal of Islamic Marketing	1
International Journal of Scientific and Technology Research	1
Dynamics of Public Administration	1
International Journal of Accounting, Finance and Business	1
International Journal of Supply Chain Management	1
International Journal and Professional	1
Travel Behavior and Society	1
British Food Journal	2
South African Journal of Information Management	1
International Management Review	1
Journal of Survey in Fisheries Sciences	1
International Journal of Computations, Information and Manufacturing (IJCIM)	1
European Research Studies Journal	1
International Journal of Engineering and Management Research	1
Jurnal Manajemen Dewantara	1
Total	54

Publication Source and Number of Publications by Proceeding

Table 2 shows the distribution of e-grocery (online grocery) publications in conference proceedings. The majority of conference papers were published once in every different conference.

Table 3: Source and number of publications by proceedings

Proceedings of 2020 International Conference on Information Management and Technology, ICIMTech 2020	1
Proceedings of IOE Graduate Conference	1
Procedia Computer Science	2
Procedia Computer Science	1
IOP Conference Series: Materials Science and Engineering	1
International Conference on Digital Marketing	1
Proceedings of the Annual Hawaii International Conference on System Sciences	1
CBU International Conference Proceedings	1

Total	9
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THEORIES/Framework USED IN E-GROCERY ACCEPTANCE STUDIES

Table 4 summarizes the theories, frameworks, and models that have been used as the basic theories in e-grocery (online grocery) acceptance research. As shown in Table 4, The Technology Acceptance Model (TAM) is the most often used theory by researchers in e-grocery (online grocery) studies with 27 articles. The second most popular adoption model is UTAUT 2 with 7 articles. Theory of Planned Behavior (TPB) has 3 articles and the Innovation Decision Model only has 1 article.

Table 4: Theories/ Framework

Theories/ Framework used in E-grocery (online grocery) acceptance studies	No of Publications	References
Technology Acceptance Model (TAM)	27	J.Li (2019), Y.Zhang (2018), K.Hunafa (2018), W. Aslam (2017), T.Chi (2018), A.Bailey (2017), M. Lau (2019), J.Lee (2019), Fabian Driedigera, Veera Bhatiasvib (2019), Sherah Kurnia & Ai-Wen Jenny Chien (2003), Radka Bauerová1 & Martin Klepek (2018), Naveed Ahmad Faraz (2018), Sri Rejeki Ekasasi (2020), 'Aini Abenoh (2020), Norfezah Md Nor (2016), Fitranty Adirestuty (2020), Marina (2022), Nguyen (2019), Olawale Fatoki (2020), Ryadi (2021), Kurniasari & Riyadi (2021), Mastana (2023), Asgari, H., Azimi, G., Titiloye, I., & Jin, X. (2023). Bruwer, L. A., Madinga, N. W., & Bundwini, N. (2022), Bhatia, G. J. (2023), Khurana, Dr. P., Arora, Dr. M., & Gupta, Ms. J. (2023), Purohit, H., Kalra, D., & Nair, H. K. G. (2023)
Extended of TAM2	1	Gaire, B., & Maharjan, S. (2023)
UTAUT	3	Yeganegi, R., & Elias, N. F. (2016), Chen (2021), Titiloye (2023)
UTAUT 2	7	Droogenbroeck, E. Van, & Van Hove, L. (2021). An (2016), M. Hussain (2019), C. Chen (2019), N. Sobti (2019), R. Wu (2017), Tang, M. B., Dieo, B. A., Suhaimi, M. K. A. M., & Andam, J. L. A. (2022).
Theory of Planned Behavior (TPB)	3	Hansen (2004), Mohammad, M., & Szigeti, O. (2023), Mawardi, N. K., & Rahmaningtyas, A. (2023).
Innovation Decision Model	1	Zolfaghari, A., Thomas-Francois, K., & Somogyi, S. (2023).

CONCLUSION

The systematic literature review evaluates e-grocery (online grocery) acceptance studies from year 2015 to 2023, with an emphasis on TAM as the base method. The data was collected from Scopus and Web of Science (WOS), two well-known online databases. The purpose of this study is to offer a critical analysis of the factors that drove the rapid growth in the use and adoption of e-grocery services. 21 papers were finally reviewed by the researcher as a final paper that meets the criteria for adoption of online grocery.

The study's findings also point to the variables that affect consumers' adoption and usage of e-grocery services. Based on adaptations from TAM theory, perceived usefulness and ease of use are the most frequently occurring factors across the 21 primary studies. The results of this study also identify what factors influence consumers to adopt and use e-grocery services. The most common factors found among the 21 primary studies are Perceived Ease of Use and Perceived Usefulness, which are adapted from TAM theory.

According to research, the TAM-based model is still a well-liked and frequently applied predictor of online grocery intention and usage behavior. This viewpoint, however, is unable to provide a convincing explanation for why online grocery shopping is not yet widely used in developing nations. Furthermore, the phenomenon of consumer rejection persists even in developed nations because online groceries services lack a common standard and there are inconsistencies across systems.

The overall goal of focusing on current studies is to provide an overview of the constructs and models that have been employed in previous online grocery research. Due to the system's omnipresent nature, additional technologies and offerings may be added in the near future as the area of online groceries continues to expand. As a result, future research could include using the proposed model in an actual study to investigate e-grocery acceptances in Malaysia.

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