

Factors That Drive Purchasing of Groceries through E-Commerce

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Online shopping is a rapidly evolving industry, as Internet technologies and applications provide customers with more accessible, convenient, and cost-effective ways to find a wider range of products than traditional shopping. A crisis such as COVID-19 also causes consumers to learn or adapt to new shopping habits. Understanding consumer purchasing patterns during crises is critical to any business's success.

Keywords: online shopping ; groceries ; TAM ; price ; Indonesia

1. Introduction

COVID-19 is an ongoing worldwide pandemic that has affected human life and behavior all around the world. Based on this situation, the government extended its restrictions on community activities (*PPKM darurat*) to prevent the spread of the virus ^[1]. There are many activities affected by this pandemic and one of them is online businesses. It was found that, by using e-commerce to satisfy the needs of the people, the government can achieve its goal of reducing the mobility of residents ^[2].

Due to the government's social distancing regulations, which have resulted in changes in consumer behavior, there are limitations on movement and activities. Based on these regulations, many activities such as selling or purchasing products have moved to online platforms, and many customers use these platforms to meet their daily needs ^{[3][4]}.

The growth of the Internet has already changed the lifestyles of consumers as well as their shopping behavior. Due to the Internet and mobile connectivity in Indonesia, there is a high rate of e-commerce in Indonesia. The Indonesian Internet Service Providers Association (APJII) survey found that, of a total of 277 million people in Indonesia, there are 197.6 million (73.7%) Internet users ^[5]. Online shopping is among the reasons for the increase in Internet access, especially during the pandemic.

Online stores are viewed as a way for the community to fulfill needs without having to leave their homes. Online shopping has become more popular as a new lifestyle among Indonesians. The growing public interest in online shopping has influenced the rapid development of Indonesia's e-commerce industry. This is seen in the accelerated e-commerce growth in Indonesia, from 54% in 2019 to 91% in 2020 ^[6]. Online shopping platforms have enabled people to meet their needs while adhering to social distancing regulations. With the pandemic's restrictions on freedom of movement, online shopping has increased dramatically. During a crisis, consumers' preferences, such as what they buy, where they shop, and how frequently they shop, change ^[7]. This trend is bolstered by the rise of e-commerce platforms in Indonesia. Each of those online shops offers a variety of attractive services and discounts on their platforms to increase their sales, while also helping the government to reduce the mobility of people.

Online-based economic growth influences changes in consumer behaviors, lifestyles, and activities. When shopping, consumers use the Internet as they value time, efficiency, and cost savings. They are also not required to visit physical stores and interact directly with sellers. Online shopping allows consumers to do their routine shopping through an online shop and make transactions directly on the same platform, which causes a surge in the migration of consumers to e-commerce to shop for groceries, and this surge is likely to continue. Unprecedented sales have been seen as consumers have started buying groceries online ^{[8][9]}. Even consumers who never bought groceries online in the past have been forced to switch to online shopping ^[10].

Sustainability is not a negotiable factor for online shops, especially in the COVID-19 era. In online shops, the concept of sustainability can include the business model, offers, and marketing strategies, and its role will become increasingly important in the coming years. This was supported by a previous study ^[11] that found a link between perceived

sustainability and customer engagement in e-commerce. The influence of e-commerce has changed people's lifestyle and has emerged alongside sustainable development. Therefore, its significance is considered to have an extraordinary impact on the modern world ^[12]. In order to be sustainable, online grocery shops must take into account e-commerce customers' unstable behavior.

2. Technology Acceptance Model (TAM)

With the advancement of technology and media, online shopping has recently become a popular shopping method ^{[13][14]}. In recent years, there has been a steady increase in the number of online shoppers and online sales ^[15]. This was accelerated by the spread of COVID-19, which has pushed people to purchase more from online shops ^{[3][4]}. Online shopping has advantages over traditional shopping options because it is available anywhere and at any time ^[16]; it saves time ^[17]; it offers a wide range of products ^[18]; and it makes cost saving possible ^[19]. Previous studies based on the Technology Acceptance Model (TAM) developed by ^[20] prove that these advantages are among the most important positive influencing factors of intention ^{[13][21][22]}. In addition to the perception of usefulness, studies using TAM portray how the ease of use affects online consumers' purchase intention ^{[22][23][24]}. Online retailers should determine the factors that could hinder and promote online shopping intent to encourage consumers to purchase more ^[25].

3. Perceived Ease of Use

The benefits of perceived ease of use in e-commerce include ease of ordering at any time and from any location, perceived ease of information searching, and overall ease of use ^{[26][27]}.

TAM asserts that perceived usefulness is influenced by perceived ease of use. Previous research on online shopping has discovered that perceived ease of use influences perceived usefulness in both developed and emerging markets ^{[27][28][29]}. Therefore, consumers will perceive the usefulness of online shopping if it is easy to use by being connected to the Internet for purchasing products ^{[30][31][32][33]}. A study of online grocery shoppers reveals a significant and positive relationship between perceived ease of use and perceived usefulness ^[34].

4. Attitude towards Online Grocery Shopping

In TAM, the intention of the user towards a new system or technology is strongly affected by the perceived usefulness and their attitude towards using technology ^[20]. Several studies of online shopping noticed a significant relationship between perceived ease of use, perceived usefulness, and attitude ^{[35][36][37]}. Specifically, Kurnia and Chien ^[34] investigated numerous factors impacting Australian consumers' acceptance of online grocery shopping and discovered that perceived ease of use and perceived usefulness are the strongest predictors of attitudes.

5. Conclusions

The coronavirus pandemic has accelerated the adoption of online shopping, particularly for groceries. Online shopping in Indonesia is unlikely to cease or slow down after COVID-19. Indeed, increased online shopping is likely to continue after the pandemic. The results are consistent with previous studies about the use of TAM in online grocery shopping ^{[34][38]}.

5.1. Theoretical Implications

Studies conducted in developed countries found that price ^{[8][39][40]} and perceived health risk ^{[41][42][43][44]} were important factors in the decision making of customers regarding purchasing groceries through online shops.

Therefore, the findings add new insights by showing that health risk and price have no significant effect on the online grocery shopping purchase intention of customers.

5.2. Practical Implications

A knowledge of consumer behavior is essential to understanding their decisions about buying groceries online. Therefore, providing insights for merchants, producers, and scientists could help them to discover important ways to improve e-commerce technologies. The government can benefit from the findings to know better how to motivate people to meet their daily needs through online shopping platforms and therefore reduce physical contact and curb the spread of the virus.

Therefore, online shops should prioritize the usefulness of their applications and services. Another important aspect of online grocery shopping is the influence of a reference group on customers' decision making. Online shops need to consider that individuals highly value their friends' and family's opinions. They can benefit from this networking effect and increase their customer base through word-of-mouth marketing.

References

1. Available online: <https://covid19.go.id/p/regulasi> (accessed on 25 July 2021).
2. Sudaryanto, S.; Subagio, A.; Meliana, M. Does COVID-19 affect online experience towards repurchase intention? An empirical study in Indonesia. *J. Asian Financ. Econ. Bus.* 2021, 8, 1013–1023.
3. Tran, V.D. The Relationship among Product Risk, Perceived Satisfaction and Purchase Intentions for Online Shopping. *J. Asian Financ. Econ. Bus.* 2020, 7, 221–231.
4. Won, J.; Kim, B.-Y. The Effect of Consumer Motivations on Purchase Intention of Online Fashion—Sharing Platform. *J. Asian Financ. Econ. Bus.* 2020, 7, 197–207.
5. Irawan, W.A.; Yusufianto, A.; Agustina, D.; Dean, R. Laporan Survei Internet APJII. 2020. Available online: <https://apjii.or.id/survei> (accessed on 17 June 2021).
6. Okezone. Pertumbuhan E-Commerce Tahun ini Meningkatkan Tajam di Indonesia. 2020. Available online: <https://techno.okezone.com/read/2020/11/04/16/2304173/pertumbuhan-e-commerce-tahun-ini-meningkat-tajam-di-indonesia> (accessed on 6 July 2021).
7. Nie, B.M.; Zhao, F.; Yu, J. The impact of the financial crisis on consumer behavior and the implication of retail revolution. In *Marketing Science Innovations and Economic Development: Proceedings of 2010 Summit International Marketing Science and Management Technology Conference*; Orient Academic Forum: Sydney, Australia, 2010; pp. 487–493.
8. Frank, D.-A.; Peschel, A.O. Sweetening the Deal: The Ingredients that Drive Consumer Adoption of Online Grocery Shopping. *J. Food Prod. Mark.* 2020, 26, 535–544.
9. Li, J.; Hallsworth, A.G.; Coca-Stefaniak, J.A. Changing Grocery Shopping Behaviours among Chinese Consumers at the Outset of The COVID-19 Outbreak. *Tijdschr. Econ. Soc. Geogr.* 2020, 111, 574–583.
10. Martinelli, E.; De Canio, F.; Nardin, G. Consumers' Channel Switching Behaviour from Off-line to On-line: The Role of the Fear of COVID-19. In *National Brand and Private Label Marketing Conference*; Springer: Cham, Switzerland, 2021; pp. 33–40.
11. Populix. Changes in People's Behavior during the Pandemic. 2020. Available online: [https://www.info.populix.co/all-reports/COVID-19%](https://www.info.populix.co/all-reports/COVID-19%25) (accessed on 22 May 2021).
12. Roggeveen, A.L.; Sethuraman, R. How the COVID-19 Pandemic May Change the World of Retailing. *J. Retail.* 2020, 96, 169–171.
13. Lim, Y.J.; Osman, A.; Salahuddin, S.N.; Romle, A.R.; Abdullah, S. Factors Influencing Online Shopping Behavior: The Mediating Role of Purchase Intention. *Procedia Econ. Financ.* 2016, 35, 401–410.
14. Wu, L.; Cai, Y.; Liu, D. Online shopping among Chinese consumers: An exploratory investigation of demographics and value orientation. *Int. J. Consum. Stud.* 2011, 35, 458–469.
15. Ozen, H.; Engizek, N. Shopping online without thinking: Being emotional or rational? *Asia Pac. J. Mark. Logist.* 2014, 26, 78–93.
16. Lester, D.H.; Forman, A.M.; Loyd, D. Internet Shopping and Buying Behavior of College Students. *Serv. Mark. Q.* 2005, 27, 123–138.
17. Abbad, M.; Abbad, R.; Saleh, M. Limitations of e-commerce in developing countries: Jordan case. *Educ. Bus. Soc. Contemp. Middle East. Issues* 2011, 4, 280–291.
18. Delafrooz, N.; Paim, L.H.; Khatibi, A. A research modelling to understand online shopping intention. *Aust. J. Basic Appl. Sci.* 2011, 5, 70–77.
19. Choi, J.; Park, J. Multichannel retailing in Korea: Effects of online shopping orientations and information seeking patterns on channel choice behavior. *Int. J. Retail Distrib. Manag.* 2006, 34, 577–596.
20. Davis, F.D.; Bagozzi, R.P.; Warshaw, P.R. User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Manag. Sci.* 1989, 35, 982–1003.

21. Aziz, N.N.A.; Wahid, N.A. Factors Influencing Online Purchase Intention among University Students. *Int. J. Acad. Res. Bus. Soc. Sci.* 2018, 8, 4413.
 22. Ha, N.T.; Nguyen, T.L.H.; Nguyen, T.P.L.; Nguyen, T.D. The effect of trust on consumers' online purchase intention: An integration of TAM and TPB. *Manag. Sci. Lett.* 2019, 9, 1451–1460.
 23. Ha, N.T. The impact of perceived risk on consumers' online shopping intention: An integration of TAM and TPB. *Manag. Sci. Lett.* 2020, 10, 2029–2036.
 24. Lin, H.-F. Predicting consumer intentions to shop online: An empirical test of competing theories. *Electron. Commer. Res. Appl.* 2007, 6, 433–442.
 25. Lohse, G.L.; Bellman, S.; Johnson, E.J. Consumer buying behavior on the Internet: Findings from panel data. *J. Interact. Mark.* 2000, 14, 15–29.
 26. Nguyen-Viet, H.; Tuyet-Hanh, T.T.; Unger, F.; Dang-Xuan, S.; Grace, D. Food safety in Vietnam: Where we are at and what we can learn from international experiences. *Infect. Dis. Poverty* 2017, 6, 39.
 27. Gefen, D.; Karahanna, E.; Straub, D.W. Trust and TAM in Online Shopping: An Integrated Model. *MIS Q.* 2003, 27, 51–90.
 28. Gefen, D.; Straub, D.W. The relative importance of perceived ease of use in is adoption: A study of e-commerce adoption. *J. Assoc. Inf. Syst.* 2000, 1, 8.
 29. Kim, J.B. An empirical study on consumer first purchase intention in online shopping: Integrating initial trust and TAM. *Electron. Commer. Res.* 2012, 12, 125–150.
 30. Bauerová, R.; Klepek, M. Technology Acceptance as a Determinant of Online Grocery Shopping Adoption. *Acta Univ. Agric. Silv. Mendel. Brun.* 2018, 66, 737–746.
 31. Celik, H.E.; Yilmaz, V. Extending the technology acceptance model for adoption of e-shopping by consumers in Turkey. *J. Electron. Commer. Res.* 2011, 12, 152–164.
 32. Lim, W.M.; Ting, D.H. E-shopping: An Analysis of the Technology Acceptance Model. *Mod. Appl. Sci.* 2012, 6, 49.
 33. Sondakh, J.J. Behavioral intention to use e-tax service system: An application of technology acceptance model. *Eur. Res. Stud. J.* 2017, 20, 48–64.
 34. Kurnia, S.; Chien, J. The acceptance of the online grocery shopping. In *Proceedings of the 16th Bled Electronic Commerce Conference, Bled, Slovenia, 9–11 June 2003*.
 35. Riza, A.F.; Hafizi, M.R. Customers attitude toward Islamic mobile banking in Indonesia: Implementation of TAM. *Asian J. Islam. Manag.* 2020, 1, 75–84.
 36. Teo, T. Is there an attitude problem? Reconsidering the role of attitude in the TAM. *Br. J. Educ. Technol.* 2009, 40, 1139–1141.
 37. Yang, H.-D.; Yoo, Y. It's all about attitude: Revisiting the technology acceptance model. *Decis. Support Syst.* 2004, 38, 19–31.
 38. Shukla, A.; Sharma, S.K. Evaluating Consumers' Adoption of Mobile Technology for Grocery Shopping: An Application of Technology Acceptance Model. *Vis. J. Bus. Perspect.* 2018, 22, 185–198.
 39. Andersen, P. The Effect of Math Anxiety on Consumer Price Perception and Purchase Decision. Ph.D. Thesis, The University of Texas, Austin, TX, USA, 2015.
 40. Chiang, K.-P.; Dholakia, R.R. Factors Driving Consumer Intention to Shop Online: An Empirical Investigation. *J. Consum. Psychol.* 2003, 13, 177–183.
 41. Kim, E.Y.; Liao, Q.; Yu, E.S.; Kim, J.H.; Yoon, S.W.; Lam, W.W.T.; Fielding, R. Middle East respiratory syndrome in South Korea during 2015: Risk-related perceptions and quarantine attitudes. *Am. J. Infect. Control* 2016, 44, 1414–1416.
 42. Yang, S.; Cho, S.-I. Middle East respiratory syndrome risk perception among students at a university in South Korea, 2015. *Am. J. Infect. Control* 2017, 45, e53–e60.
 43. Eriksson, N.; Stenius, M. Online grocery shoppers due to the COVID-19 pandemic-An analysis of demographic and household characteristics. *Procedia Comput. Sci.* 2022, 196, 93–100.
 44. Honey-Rosés, J.; Anguelovski, I.; Chireh, V.K.; Daher, C.; van den Bosch, C.K.; Litt, J.S.; Mawani, V.; McCall, M.K.; Orellana, A.; Oscilowicz, E.; et al. The impact of COVID-19 on public space: An early review of the emerging questions—design, perceptions and inequities. *Cities Health* 2020, 1–17.
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