

Factors Influencing Online Purchasing Behaviour Among Rural Customers in Bekok, Johor

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Abstract

This research investigates the factors of rural customers towards online purchase behaviour in Bekok. The aim of the research is to determine the purchase behaviour of Bekok people. Another objective is to determine the relationship between delivery service, payment matter, and network connection with the online purchasing behaviour of rural customers. Online purchasing behaviour is the dependent variable. However, there are challenges affecting research. The research hypotheses are related to research such as delivery service, payment matters, and network connection for better understanding of their opinion on online purchasing by rural customers in Bekok. The first problem statement is that the purchasing and refund procedures of online shopping are greatly impacted by outstanding negative elements like privacy, safety of the way of payment, and reliability; the second is acknowledging customers' difficulty predicting occurrence to the two factors is delayed delivery and order return problems; and the third is network connection conditions influence online purchasing by rural customers. This research used quantitative methods to get the data, and the data was analysed through the Statistical Package for the Social Sciences (SPSS). It provides practical insight for rural customers in Bekok and ensures their factors on using online purchasing. In this research, researchers gain knowledge of rural customers using online purchasing based on past studies. From the chapter, researchers know the factors in rural areas affect the rural customers when using online.

1. Introduction

According to Cowie, Townsend & Saleminik (2020), rural areas describe a geographical region that is far from urban areas. A rural area is not a part of the area with the highest residents. Typically, rural areas represent small, unincorporated locales under an area. Rural areas display countryside with few homes and residents, especially compared to urban areas with numerous residents. Rural areas typically get little growth support and are defined as low-attention rural areas; there is a low level and a lack of development in rural areas. In previous years, when it came to internet accessibility and the level of their infrastructure, rural areas lagged behind those in cities. According to Park, Freemant & Middleton (2019), slow internet speeds, unreliable relations, and limited internet service acceptance are typical problems in rural areas. Several factors, including low population density, a far location, and high facilities expenses, are responsible for these disparities. In addition, the lack of internet access and facilities in rural areas can seriously hinder the widespread acceptance of online shopping. According to Couture *et al.* (2021), rural customers are less likely to make purchases online because it can be challenging for their communities to connect to online stores, the speeds of loading are slower, and there's a

higher likelihood they'll run into difficulties with connectivity when making a purchase. Online shopping is the process by which customers use a website's browser or an application to buy items or products through the online businesses over the internet (Alnawas & Khateeb, 2022). Developing nations are greatly assisted by online shopping because it makes commerce profitable and favourably impacts the increase of the national GDP (Ciupac-Ulici, Beju, Bresfelean & Zanellato, 2022). Because online shopping is so inexpensive, it has provided customers and companies access to innovative and effective platforms for data and transactions. A major contributor to Malaysia's economic growth, online shopping has increased GDP by 22.5%, making it an important component of the national economy (Malaymail, 2022). The online market in Malaysia has huge opportunities for development (Muller, 2022). According to Lăzăroiu *et al.* (2020), the growing online market may present either social opportunity and risks. Nevertheless, Malaysia's government hasn't stopped the internet marketplace.

On the other hand, online shopping technology is being developed and actively implemented by the government in both the business and economic fields. It has, in part, contributed to the growth of online shopping. Malaysia has achieved the greatest online usage percentage of any country in Southeast Asia at 88% (Malaysia Digital Economy Blueprint, 2022). The Malaysian government has taken various measures in this field, including the implementation of My Digital and the establishment of an e-commerce plan focused on keeping the present pace of growth (MIDA, 2022). The Digital Economy of Malaysia E-commerce is expected to contribute 20% more to the growing online economy, according to Corporation (MDCE) (TMR Media Sdn Bhd, 2022). Due to its accessibility and affordability as a replacement for conventional purchasing, online purchasing has grown rapidly in the current digital era (Taneja, 2021). However, as the complexity of online shopping has increased, so too have consumers become liable to an unbalanced perception of online shopping; it raises more questions regarding cyberspace, and the opposite affects the intention to shop online (Klepek & Bauerová, 2020). It is crucial that this topic be examined in light of the constantly changing online market. Online purchasing businesses have investigated the variables that have both increased and decreased the willingness of customers to shop on the internet. According to Choi, Chung & Young (2019), prior research on the increase in customer preferences for online shopping placed the importance of examining the relationships between various factors that impact customers' purchasing habits and investigated their unique goals and convictions in the setting of purchasing products online from a more customer-orientated direction.

According to Tang & Zhu (2020), there are a lot of factors that have influenced the development of online shopping in rural areas. The expansion of e-commerce is crucial to the adoption of online shopping in rural areas. For example, technological advances and online shopping that are growing quickly in rural areas. The growth of online shopping affects both online confidentiality and customer trust. Because the satisfaction of their needs is the foundation of their trust in online business. Online businesses and governments respect the right to confidentiality of internet users. Security issues, which impact consumers regardless of information technology skill levels, obstruct the development of online shopping. The results of the research draw attention to potential hazards and privacy issues that Internet users must deal with. By establishing dependable payment services via the internet, training programs, and public awareness campaigns through the media, the government significantly contributes to the development of online business in developing countries. In Malaysia, online businesses have faced various obstacles that have impeded their progress, regardless of their consistent efforts and advancements in the sector. The sophistication of online shopping has increased; customers risk online shopping's unbalanced judgement (Nuhu, Liman & Mose, 2022). Consumers propensity to make purchases online decreases as their concerns about it increase. In order to communicate effectively with consumers, marketers need to know what encourages and discourages them from shopping online (Changchit *et al.*, 2019).

Bekok became the scope of this study because the researcher wanted to understand the online purchases of the customers in Bekok. Bekok is a small town with limited public transportation except for its own transportation, which can only be accessed by train through the Bekok railway station (Bekok, 2022). The limiting transportation causes them to have more choices. Then, the researchers want to explore the research about online purchasing in Bekok. In rural areas, it appears that populations are growing increasingly busier and more time-centric, so an actual change is likely to occur in the years to come. The ease of online purchasing may be investigated through specific smart advantages by the efficiency contrast, selection requirements, and significant styles (Panigrahy, 2020). The capacity to conduct searches online has made it simple for customers, who can keep on making it easy throughout the purchasing process and take advantage of more possibilities like comparing physical purchases, determining on both cost and quality, and reading feedback and suggestions that will cut down on search expenses and provide the necessary details. According to Farah, Ramadan & Harb (2019), online shopping offers amazing experiences in terms of feedback and suggestions that are not always achievable with physical shopping. This is an important aspect in today's world of commerce. In terms of having present-aware objects from looks at and suggestions, this is suitable for rural consumers.

According to Liu (2022), research shows that the most rapidly expanding online shopping customer base is rural customers. This trend is being driven by factors such as limited traditional source selection and increasing

access to the internet (Sousa *et al.*, 2022). Because of this, online stores with a variety of product offerings and marketing approaches can potentially make money from rural areas. By enhancing the standard lifestyles and providing new opportunities for commerce and income streams for various supply chain actors, supply chain operations that are tailored to rural environments and differentiated from one another can contribute to the long-term prosperity of rural areas (Vakulenko *et al.*, 2022). Furthermore, it has been determined that differentiating delivery services is a crucial tactic for fostering the expansion of online shopping (Accenture, 2022).

According to The Eurostat regional yearbook (2020), because of the increasing popularity of handheld technologies and the ever-widening regional reach of online services, rural consumers' level of internet use has increased recently. According to Sousa *et al.* (2020), online businesses have started to pay attention, as evidenced by the significant growth of their internet businesses in rural areas. Looking for a first-mover advantage in markets that they believe have more room for growth than crowded cities is the aim. In Europe, major grocers like Carrefour, Auchan, and Monoprix are beginning to sell via the internet in rural areas of France, while e-grocers Edeka and Picnic have teamed up to investigate online shopping in rural areas of Germany. In the United States, the company supply stores currently reach 80% of the population, while Whole Foods started selling goods online to rural areas by utilising Amazon's shopping shipping service to complete the final mile. Nowadays, online purchasing has become a popular application globally. Given the increase in internet usage over the past ten years, online purchasing has become popular in the modern world. Internet-based products and services are offered through a variety of platforms, including Shopee and Lazada. Following the Malaysian government's February 2021 implementation of the Malaysia Digital Economic Blueprint (MyDIGITAL), the digital economy has emerged as a critical component for allowing rural economic development in Malaysia. Due to over 80 percent of the rural population having a connection to wireless internet access in the year 2019, it ought to be possible everywhere. This is because they have become an essential part of the modern market (Malaysia Digital Economy Blueprint, 2022).

According to Li, Westlund & Liu (2019), rural consumer perspectives towards online purchases are discussed along with the reasons rural customers favour it. Since rural populations' purchasing capacity has significantly increased as a consequence of the economy's overall expansion, rural markets have grown in importance. Customers can directly purchase products or services from sellers over an internet connection in the manner of purchasing items online, also known as online purchasing. Rural consumers significantly impacted by online shopping (Koo, Kim & Lee, 2022). In order to attain an excellent level of customer support and fulfilment, marketers have to investigate what customers observe, consider, like, and purchase. Put differently, marketers need to know what customers' behaviour is prior to as well as after they make a purchase, such as knowing the process of buying things online of consumers, especially trends, the impact of internet marketing purposes, and the factors that influence online purchase preference, which is essential for knowing online purchase behaviour. The growing trend of online purchasing presents an ideal chance for those living in rural areas. With the introduction of numerous possibilities for online payments, online banking, online shopping, car reservations, and digital buying behaviour, it promotes development in market and business operations (Chao & Biao, 2021). In the commercial world, online shopping is an innovative model that replaces traditional commerce with digital trade that makes use of information and communication technology, or internet access (Ahmedov, 2020).

According to Lysenko-Ryba & Zimon (2021), delivery service is an important factor of rural online purchase behaviour. Acknowledging customers' difficulty to predict occurrence to the two factors is delayed delivery and order return problems. Additionally, delivery services typically have a high level of failure, which increases the expense of shipping and consumes additional customers' time (Mangiaracina *et al.*, 2019). Due to the distance between rural areas and urban areas in which shipment employees operate, shipping and transportation are slow and sometimes impossible in certain locations (Vaishar & Štátná, 2021). For example, manufacturer of e-hailing in minor rural areas across Malaysia, especially in locations where quality transport services appear to be missing, Maxim has established itself as a vital player in the transport industry. However, in Sabah, he added, problems in rural areas are made worse by accessibility issues, lack of facilities, and unstable terrain, which makes it more difficult for both residents and goods to move freely (Santos, 2024). Payment matters also as a factor influencing online purchase behaviour by rural customers. When making purchases online with debit and credit card payments, customers place emphasis on the trustworthiness of the seller as a component of the payment privacy and safety. Thus, customers use the cash for their purchases. According to Greer, Klasa & Van Ginneken (2020), an investigation on customer behaviour, one of the main factors preventing people from making an online purchase is the ineffectiveness of unprotected payment methods. As a result, additional research on the subject of online shopping also showed that respondents' experiences with payment safety during their purchases were unclear and dangerous, showing the reason for how many consumers did not accept it. According to Tham *et al.* (2019), the purchasing and refund procedures of online shopping are greatly impacted by outstanding negative elements like privacy, safety of the way of payment, and reliability.

According to Venugopal *et al.* (2021), although each online shopper has a policy on refunds, rural consumers find that the policy is unclear to them and that the length of time it takes to receive their refund is intolerable. Because of this, they constantly worry about whether the product will be replaced. When it comes to online shopping, the quantity of information pertains to having the opportunity to gain sufficient knowledge, but the honesty of the sellers' data is what gives customers greater trust in their purchases. Precise and complete data given to sellers can help eliminate customers' doubts and fears regarding the brand or business. According to Rahman (2023), economist Dr. Ahmed Razman Abdul Latiff of the Putra Business School, research indicates that between 70 and 80 percent of people continue to depend on cash, demonstrating that people's reliance on cash is still strongly established. He says the majority of people living in rural areas exclusively use cash for their daily activities since, although they own smartphones, they are mostly very basic and unable to use digital services. He also presented the deployment of 5G as limited to specific regions and difficulty encouraging the use of alternative gadgets in all places. Razman noted that customers were presently cautious because of the rise in frauds and additional crime problems, and he noted the shift towards electronic payments was concentrated in city regions. We must acknowledge that not all Malaysians reside in city regions; people utilising the services away from cities remain extremely reliant on cash.

Network connection conditions influenced online purchasing by rural customers. Given that technology continues to develop, internet proficiency has emerged as a crucial factor in online purchasing when it comes to researching business goods via computers and the internet (Nathan *et al.*, 2019). According to Renouf & Maniglier (2021), the factors that discourage it are also listed, like the habit of trying an item before buying it, which is common in physical shopping; anxieties related to dissatisfaction; disruptions in the network and internet; issues with exchanges; difficulties with client service; and tracking orders. The lack of satisfactory internet service in rural areas causes issues like insufficient interactions, slow website loading times, and unfinished payments, which agitate rural customers and increase their anxiety of lacking money or products. Furthermore, practical tracking of the product is difficult because of a weak network in rural areas, from order to shipping. For instance, the CEO of Inference Tech Sdn Bhd, Izad Che Muda, claims to have personal knowledge of the difficulties associated with implementing Internet of Things technology in rural locations. Inference Tech provides an application called Cameras for actual-time road problem identification; however, in certain rural regions with poor 3G and 4G coverage, it is very difficult to do so (Malaysia Digital Economy Blueprint, 2021). Example statistics of the problem, In November 2019, the Malaysian government implemented Perkhidmatan e-Dagang Setempat (PeDAS), and localised e-commerce ecosystems of rural e-commerce face a lot of barriers. For instance, rural areas of residents must contend with physical obstacles like limited warehousing and storage facilities, problem delivery services, and poor road access.

The expansion of e-commerce has been weak in rural areas due to a combination of digital and technological obstacles, including limiting knowledge of technology, fear of technology, and internet problems. A state administrative council member claims that a component of the reason for the holdup in building mobile phone towers to enhance Internet service in Johor is a current shift in government. Bekok senator Dr. S. Ramakrishnan enquired about the status of a communications tower's installation in his area at Kampung Orang Asli Selai during the Q&A period. According to Bukhari Yahya, chief of the construction department of the Malaysian Communications and Multimedia Commission (MCMC), the carrying out procedure for such initiatives is broken down into several stages, with the preparation phase beginning a year ago. He claims that although hiring builders requires time as well, those procedures are already complete, and construction will shortly start. In addition to upgrading current towers at other places, two new telecommunications towers will be constructed in the Felda Lok Heng area. He continued by saying that occasionally a smartphone or other device's support features may be the reason for sluggish Internet connectivity (Ministry of Communication, 2022). This study aims to determine the online purchasing behaviour among the Bekok people, and to determine relationship between delivery service, payment matter and network connection with the online purchasing behaviour of rural customers.

2. Literature Review

2.1 Online Purchasing Behaviors

Online purchasing is a procedure by which customers communicate with sellers immediately and use a website to buy items, products, and services (Simanjuntak, 2020). Nalendra *et al.* (2021) state that online purchasing is a type of online buying in which sellers and buyers connect via the web as the medium. In a comparable way, Alzoubi & Ghazal (2022) defined online purchasing as a process of making product purchases whether the product is a goods or a services via the web. Gulfranz *et al.* (2022) define the importance of online purchasing as "factors that motivate customers selection behaviour in online purchasing." According to the study, online

purchasing is becoming a popular shopping destination and a transactional tool for consumers in international markets. It additionally serves as a means of communication subsequently. Because online shopping proves more satisfying than traditional shopping without regard to duration, location, or clarification, an especially crucial aspect of online shopping is a continuous interaction between business and customers. Traditional shopping is typically associated with worries about traffic jams, spaces for parking, limited availability, etc. It shows online replacing traditional shopping for consumers.

According to Yap, Xu & Tan (2021), the study "Online purchasing -an approach examined rural customers" examines rural customers online purchasing habits. Their research makes it evident that online businesses have the biggest positive impact on influential elements. Online shopping helps you save time and is easy to use. A big selection of businesses and accessibility at all times are also key components of online shopping. However, among the disappointing elements identified is the rural customers' unwillingness to try online purchasing because they can't visit the products before making a purchase. This causes rural customers to be unable to trust and unwilling to pay through online purchasing. The Malaysian government has implemented a number of e-commerce-related projects and activities that aim to strengthen the willingness of its shoppers to make purchases online. To help Malaysian businesses progress forward in e-commerce, the government in sectors is making the online platform practical (Malaysia Digital Economy Corporation, 2020). Due to the enormous quantity of products accessible online, many developments in technology have increased consumers' desire to make purchases online. As a result, the purpose of this research is to determine the people that studied online purchasing.

2.2 Factors Influencing Online Purchasing Behaviors

2.2.1 Delivery Services

According to Gajewska, Zimon, Kaczor & Madzík (2019), a delivery service represents the main component that has an essential effect on customer fulfilment, who generated an approach for evaluating online consumer fulfilment in online shopping. The standard of the online shopping delivery service is assessed within the research they conducted with regard to dependable shipping periods, promptly informed of issues with shipping, accepted shipping durations, and defined time frames for shipping. Numerous previous research investigations have shown that online customer fulfilment is significantly impacted by delivery service quality (Mogire, Kilbourn & Luke, 2023).

Online businesses have worked hard to provide the greatest possible experience for their delivery services because it is being shown how important delivery services contribute to customer fulfilment. Through providing a variety of delivery durations, a lot of online businesses aim to set themselves apart with their delivery services (Dang, 2021). In online business, delivery time refers to the speed that products are shipped, if the products are truly delivered on schedule, which customers are able to choose the expected arrival, and quickness, rapidity, and precise shipping. Numerous research projects have investigated consumer fulfilment concerning delivery durations or arrivals. For instance, conduct research on customer demands for various delivery speeds like immediate, quick, and following-day delivery (Talalyan & Obasi, 2021).

Rural areas bring up the crucial delivery and transportation challenges that take delay, as not each of the rural locations provides similar transportation availability, making it difficult to transport goods in an efficient and secure way (Vakamullu, Misra & Venugopa, 2021). According to Jiang *et al.* (2019), rural areas of delivery services affect the accessibility of the product, the quality of the products, the purchased products, and shipping expenses. Both in-home and out-of-home deliveries are possible delivery options in rural areas; home delivery service is preferred because there already exist shipping providers in place. In comparison to making use of gather scores, this delivery method becomes more feasible in rural areas. According to Kou *et al.* (2022), in rural areas discussions with rural logistical services, transit, and the environment could affect rural delivery service.

According to Liu, Pretorius, & Jiang (2019), multimodal transportation can successfully lower shipping expenses when used for shipping deliveries, especially in situations where there are few purchases. As a result, delivery services are available in rural areas. According to Media Selangor Sdn Bhd (2023), the Prime Minister, Datuk Seri Anwar Ibrahim, has a budgetary provision of RM1.63 billion for the development and restoration of roadways and provided RM134 million overall towards the construction of streetlights for rural areas under Budget 2024, which has the potential to enhance the socioeconomic standing of rural residents and slowly decrease the disparity between urban and rural.

H1: Delivery service has a positive relationship with online purchase behaviour of rural customers.

2.2.2 Payment Matter

Online payment represents one of the connecting components of online shopping that determines its efficiency or rejection. According to Gadhavi (2019), it shows that an ineffective online payment system can lead to a failure in online buying because it is regarded as an important trend in online shopping. Moreover, the growing number of internet-based purchases requires a simple means of payment, which traditional methods of payment can support (Zhao, Wu & Guo, 2022). Online payment is becoming more and more popular in recent years. But it's also critical that online payments be secure and effective and should be simple to operate (Ali, Hussin & Abed, 2019). According to Anic, Škare & Milaković (2019), the crucial details regarding the way to complete online payments purchases offered to customers are provided within the privacy argument. Online payment examined customers' views of confidence.

When consumers are unaware of the related privacy regarding their operations, they will probably become unwilling to make online payments. Furthermore, consumer opinions on online payment are influenced by the standard of the privacy statements. Thus, to improve the impression of privacy and safety. Customers ought to be presented with statements in an interesting manner that attracts their interest. Furthermore, the safety statement must be precise and simple enough for the consumer to follow, since the consumer's understanding of the privacy of online payment purchases is based on the privacy and safety statements they are given. According to Vakamullu *et al.* (2021), they demonstrated that the primary factor causing customers to exhibit a significant amount of a decrease and gain is preventing them from engaging in dangerous behaviours such as internet buying. As a result, the identical finding has been drawn from numerous additional studies: customers desire to be free from any kind of uncertainty or danger when making payments.

Payment matters are crucial factors to take seriously while deciding how to make purchases online. When they believe in higher hazards of cybersecurity, rural customers can be stopped from participating in online shopping since they are typically more concerned with the privacy and security of their purchases made via the internet (Kumar, 2023). Online shopping purchasing procedures involve internet shopping, purchasing, and payments, making it impossible for customers to maintain a clear awareness of the transportation companies' equipment and procedures area. Customers choose to purchase online since the selection of products is greater there than in actual locations. In addition, home delivery, logistical information enquiries, and various other practical services are offered through online purchasing.

Taking into account rural customers' limited concepts of use, payment is influenced by many aspects (Jiang *et al.*, 2019). According to Ashwin & Priti (2019), the main obstacles in making an economy without money are online crimes and unauthorised online use of websites. Therefore, in order to safeguard rural customers from online fraud, it is essential to strengthen online security. Additionally, the government must work harder to inform the public regarding the advantages of e-commerce platforms along with enhancing their security measures. According to Ayub (2023), Datuk Seri Ramli Mohamed Yoosuf, director of the Bukit Aman Commercial Crime Investigation Department (CCID), 8,868 instances of purchasing online or online shopping fraud totalling RM163 million in losses were reported in 2023. This was one of the crimes that was widely reported. He made an argument that, according to the department's evaluation, the mean yearly case count had nearly reached 10,000, and the yearly total had been steadily rising, and more than half of the total loss reported this year has been attributable to online fraud.

H2: Payment matters have a positive relationship on online purchase behaviour of rural customers.

2.2.3 Network Connection

According to Setiawan *et al.* (2020), the growth of the internet together with the development of modern innovations has had an important effect on the lives of individuals everywhere around the world. Traditional business methods faced a major revolution. Nowadays, companies are opening up their businesses via online channels to produce or market their goods. Online businesses selling goods and services have become more common, which has had significant effects on traditional business. Nowadays, consumers have no limitations on time or location and can purchase products and services almost anywhere, 24/7, through online purchasing. According to Vakamullu *et al.* (2021), rural areas have fewer internet access points, thus dealing with disruptions from incomplete or delayed tasks can be challenging exchanges. These kinds of online browsing bugs lead to transaction failure, which causes and instills fear in rural residents.

According to Kumar (2023), rural customers are unlikely to make purchases online, as accessing online shops might be challenging for them, like waiting times can be slower, and there is a better chance they will run into connectivity issues when buying. According to Valentín-Sívico *et al.* (2023), internet connectivity has technological limits; there have been issues with network availability. The disruptions took a few days due to technical issues. Therefore, there were differences in the enhanced quality of services during the duration. According to Tognisse, Degila & Kora (2021), the government ought to implement strategies that enhance service in rural areas through development and support facilities for rural residents. It is important to create solutions that respond to the requirements and life of rural residents, such as building effective areas, providing enough effectiveness, and strengthening networking sectors. Governments and corresponding institutions must work

together to establish a supportive atmosphere for collaborative use of network facilities. They can provide support for the development of rural networks in order to support rural areas.

According to New Straits Times Press (M) Bhd (2021), former Minister of Rural Development Datuk Seri Mahaz Khalid is improving the accessibility of the internet network in rural areas. In order to reach this goal, the Ministry of Rural Development (KPLB) and the Ministry of Communications and Multimedia (KKMM) will collaborate to enhance the internet connection in the rural areas that will be determined, according to former prime minister Mahathir Mohamad (MalayMail, 2021). In order to boost the internet network, the Malaysian Communications and Multimedia Commission (MCMC) will then speed up the installation of broadband networks in rural and inner cities through the Universal Service Provider (USP) program in December 2021 with the assistance of the internet service providers. According to Deputy Minister of Communications and Multimedia Datuk Zahidi Zainul Abidin, as of November 30 of this year, 2,481 of the 5,394 transmitting stations in the country had undergone 4G technology upgrades as part of the USP programs.

H3: Network connection has a positive relationship on online purchase behaviour of rural customers.

2.3 Theoretical model and hypothesis

The researchers had assumed the relationship between independent variables and dependent variables, whether positive or negative, according to the respondents' attitudes, as displayed below in Fig. 1.

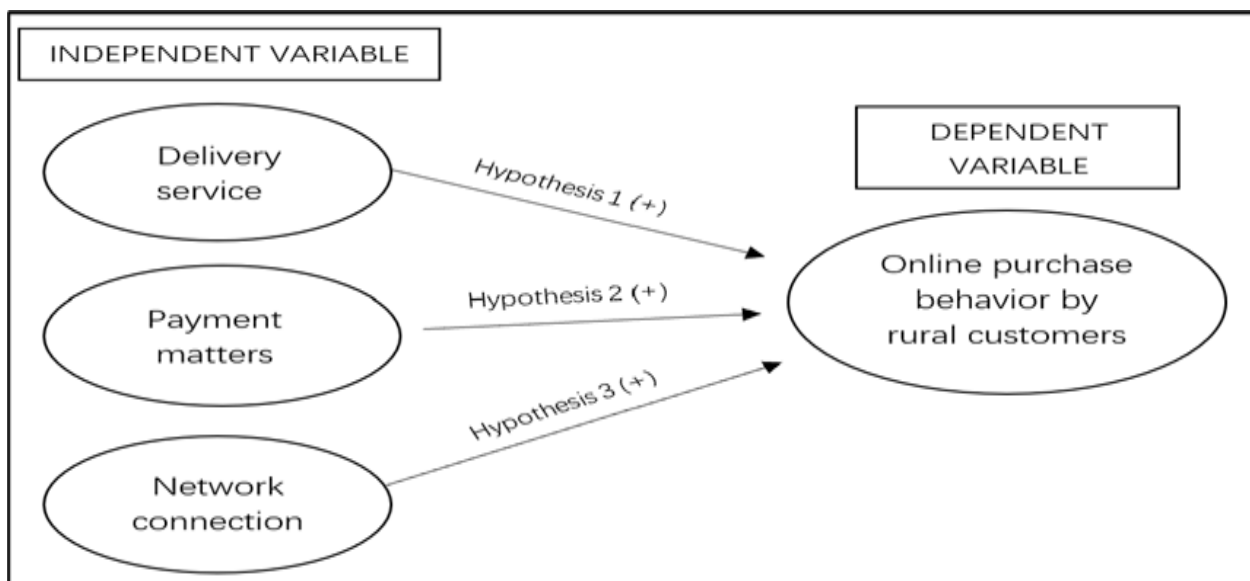


Fig. 1 Research Framework

3. Research Methodology

3.1 Research Design

The researcher will use quantitative methods in this research. According to Sharma *et al.* (2023), the quantitative method is the approach and measures used to design and generate variable, measurable numbers. The gathered information is the outcome of actual statistics and data. These methods take some time and preparation. Their answers are typically closed-ended. According to Sreekumar (2024), quantitative research methods occur in that a particular category of people, the sample population, are observed. Numerous statistical information is gathered using a variety of techniques in these types of research, and the information is typically quantitatively analysed to gather, contrast, or demonstrate the connections among the information. In general, investigations, organised observations, and questionnaires are examples of quantitative research methods. In this research, the researcher will use questionnaires to determine the relationship between delivery service, payment matter, and network connection with the online purchasing behaviour of rural customers in Bekok.

3.2 Population and Sampling

The researcher used a non-probability sampling design in this research. Non-probability sampling is the selective choice of respondents and participants within the study population that reflects the researcher's goal or areas of understanding. Non-probability sampling selects the sample through individual judgement as compared to random choice. Not all members of the public will have an opportunity to take along with the study using this

approach (Adeoye, 2023). In this research, researchers only select the rural customers Bekok to participate in this research.

The researcher will use convenience sampling in this research. Another term for convenience sampling is accessible or chance sampling. Researchers that apply convenience sampling choose participants that are easily communicable to and who readily accept respondents. Researchers do not put any conditions on participation; instead, researchers look for respondents in conveniently easily accepted areas. In this research, researchers will focus on villagers in Bekok, including Malays, Chinese, Indians, and others, to become the respondents of this research. The researchers choose random respondents in Bekok to answer their opinion about research of factors of rural customers towards online purchase behaviour in Bekok. Based on the population of 3761, the sample size is 346 and researcher need to disseminate 346 questionnaires selected among people in Bekok.

3.3 Research Instruments

Researchers adapted from earlier studies included utilising theory and measurement scale from previous studies to determine new research. This method may make sure of the reliability of the research instrument based on previous studies. Research instruments involved pilot tests to ensure the questions are relevant or irrelevant. Then, ensure the alpha coefficient range to display the strength of association from poor to excellent. In conducting this research, researchers used a 5-point Likert scale that includes strongly disagree, strongly agree, neutral, agree, and strongly agree. The demographic questions include gender, race, age, how many times within a specific period, type of common platform uses, and how much is spent on online shopping on average per month. The questionnaire consists of 26 questions that want to ask the opinion about rural customers towards online purchase behaviour, including factors like delivery service, payment and security matters, network connection, and online purchasing behaviour. Independent variables included delivery service, which had 6 questions; payment matters, which had 7 questions; and network connection, which had 5 questions; and the dependent variable included online purchasing behaviour, which had 8 questions.

3.4 Data Analysis Method

Methods used to analyse data of the research are based on the research objectives. Table 1 is explaining the methods used.

Table 1: Method used to analysed research data

Research Objective	Method of Analysis
1. To determine the online purchasing behaviour among the Bekok people.	Descriptive Analysis Frequency Percentage Mean score
2. To determine relationship between delivery service, payment matter and network connection with the online purchasing behaviour of rural customers.	Correlation Analysis

4.0 Results and Discussion

4.1 Online Purchase Behaviour

The first objective of this research is to determine the online purchasing behaviour among the Bekok people. In this research, the outcomes give an in-depth understanding of the Bekok people's purchasing and are founded on demographic and behavioural data from 240 respondents. According to the poll, there are considerably more female respondents (63.7%) than male respondents (36.3%), showing that females are more likely to engage in online purchasing. Besides that, Chinese made up the largest percentage of responders (50.0%), being followed by Malays (30.8%) and Indians (12.9%), and (6.3%) of the population was from other ethnic groups. Next, respondents in the 18–34 age range made up the greatest percentage (43.3%), then came people in the 35–50 age range (36.3%), and the percentages of younger individuals less than 18 years old and elderly individuals more than 50 years old were lower, at (15.4%) and (5.0%), accordingly.

Then, the most popular rate for purchasing is twice a month (52.1%), then once a week (18.8%), and very rarely (20.8%), and 8.3% shop more than 5 times every month. Next, online shopping sites are largely occupied by Shopee (30.0%) and Lazada (31.7%), with Taobao (16.3%) and TikTok (10.0%) being widely represented; Facebook (5.0%) and Instagram (7.1%) are more common but less so. Lastly, most respondents (31.3%) paid between RM50 and RM100, while (32.5%) spent less than RM50; however, fewer respondents spent between RM100 and RM200 (25.8%) or more than RM200 (10.4%). According to the results below, the mean score of the 233 respondents with a 100% response rate ranged from 3.84 to 4.53. This outcome demonstrates that internet

buying conduct is acceptable. All things considered, it can be claimed that every Bekok respondent exhibits a high level of online purchase behaviour.

Table 2 Level of online purchase behaviour

Item	Standard Deviation	Mean	Level of Mean
I am happy to purchase online	0.63	4.39	High
I prefer online shopping going to a physical shop	0.66	3.84	High
I buy many types of goods online	0.75	4.29	High
I can buy the products at any time, 24 hours a day	0.59	4.47	High
It is easier for me to choose and compare products	0.52	4.22	High
I can easily search for products	0.58	4.53	High
I spend less time making a purchase	0.68	4.07	High
I can choose price options that suit my budget from different sellers on the same products	0.57	4.43	High

Clearly the result shows that online purchase behaviour has been influenced by rural residents in Bekok. According to Chen, Yang, and Xiong (2018), discover how pricing value, habit, safety fears, perceived utility, simplicity of usage, and reliability all impact how people purchase online. The majority of people reside in rural regions and buy at local shops; they go to the closest place to get anything they require (Sanketh, 2024). A few of the elements that affect consumers' online buying habits are simple purchase processes, a wide selection of goods, reduced pricing, and product information accessibility (Gaur & Sidhpuria, 2019). According to Elampirai (2019), it was discovered that affordability and satisfaction were the primary drivers of online shopping. Online businesses cheap prices encourage rural consumers to buy online, and they are happy with the deals and savings they find there (Pathan, 2019).

According to the research result above, the researcher fulfils the first objective of online purchase behaviour of people in Bekok. The research meets the demand for basic data by clearly dividing the demographics of Bekok's online buyers by gender, race, age, etc. In addition, the research results meet with previously studied expectations; the main motivating factors mentioned are emotional, ease, platform dependability, cost, and availability. The results demonstrate that rural Bekok customers are active internet buyers through their preference for rate for purchasing (twice a month), and platforms are largely used for online purchasing (Shopee, Lazada, Taobao, etc.).

However, there are some arguments in this research, like demographic trends. Based on the data, researchers notice younger people are more active in online purchasing. It means the younger generation is more preferred and adaptable to e-commerce trends. Conversely, the older population may be less interested in online platforms due to technical issues. Furthermore, the gender disparities between female (63.7%) and male (36.3%). This proves that women are more likely to use online shopping than men. Although the final results are roughly in line with the results, they provide a new perspective on rural consumer behaviour in Bekok, especially in terms of gender participation and generational trends. The researcher hopes that the conclusions of the research will enable online businesses and local governments to pay attention to and promote the use of Internet shopping in rural areas. For example, various incentives can be taken to promote elderly and male buyers. This can bring more influence on future researchers for study.

4.2 Relationship Between Delivery Service, Payment Matter, And Network Connection with Online Purchasing Behaviour

The second objective of this research is to determine the relationship between delivery service, payment matter, and network connection with the online purchasing behaviour of rural customers. According to the data collected and analysed, the r (r) value of Spearman's correlation coefficient is 0.575, and the p (Sig.) value is less than 0.05, indicating that there is a positive and moderate relationship between delivery service and online purchase behaviour. The results show that H1 for this research is accepted. This finding is similar to several previous studies that indicate that delivery service boosts customers' reliance on the online, and this influences their behavioural goals and willingness to buy (Vakulenko *et al.*, 2022). Besides that, when customers in rural areas are unable to get a greater range of products locally, they're more likely to acquire a wider variety of things that are unavailable locally through the internet and rely on delivery services at home for their online purchases (Sousa *et al.*, 2020). Practically speaking, product division and delivery service are methods to attain customer behaviour and long-term success (Akram, Abbas & Khan, 2022).

According to the data collected and analysed, the r (r) value of Spearman's correlation coefficient is 0.597, and the p (Sig.) value is less than 0.05, indicating that there is a positive and moderate relationship between delivery service and online purchase behaviour. The results show that H2 for this research is accepted. According to Al-Okaily *et al.* (2022), there is a positive relationship between "willingness to use digital payment

purchases" and "protection and privacy." According to Fanelli (2021), using advances in technology like e-procurement, e-processes, and e-payments gives online businessmen the ability to launch and grow their online business. Payment security is considered important since it improves people's opinions about how trustworthy a website works (Torres, 2018). Following with Ramos (2021), online payments are thought to be an easy and straightforward method to help rural customers make purchases. Digital payment technology is expected to be more probable to be implemented in the future by rural communities if they consider it simple and easy to use (Yeoh & Chin, 2022). Online transactions may be encouraged by using a safe payment system and effective settlement processes (Patil *et al.*, 2020). According to Gupta and Arora (2019), the majority of customers quickly began utilising mobile payment systems and increased their usage when cashless payment was introduced.

Table 3 Spearman correlation coefficient

		OM_DS	OM_PM	OM_NC	OM_OPB
OM_DS	Correlation Coefficient	1.000	.597**	.580**	.575**
	Sig.(2-tailed)		<.001	<.001	<.001
	N	240	240	240	240
OM_PM	Correlation Coefficient	.597**	1.000	.702**	.749**
	Sig.(2-tailed)	<.001		<.001	<.001
	N	240	240	240	240
OM_NC	Correlation Coefficient	.580**	.702**	1.000	.659**
	Sig.(2-tailed)	<.001	<.001		<.001
	N	240	240	240	240
OM_OPB	Correlation Coefficient	.575**	.749**	.659**	1.000
	Sig.(2-tailed)	<.001	<.001	<.001	
	N	240	240	240	240

** Correlation is significant at the 0.01 level (2-tailed).

According to the data collected and analysed, the r (r) value of Spearman's correlation coefficient is 0.580, and the p (Sig.) value is less than 0.05, indicating that there is a positive and moderate relationship between delivery service and online purchase behaviour. The results show that H3 for this research is accepted. This finding is consistent with Zhou, Yu & Choguill (2021); the internet and the rural economy have worked together to boost the growth and spread of rural online shopping in emerging nations. This study confirms that the growth of online shopping reduces the gap between interaction and usage and dissolves traditional limits of rural regions (Yin & Choi, 2022). Online shopping strengthens ties between rural communities and integrates the compared isolated rural area into a larger attached business (Lu *et al.*, 2020). It makes it possible for more rural areas to progressively transition from stable physical space to active internet (Zhang *et al.*, 2022).

These findings are consistent with the hypotheses and theoretical framework that emphasise delivery service, payment matter, and network connection as factors that determine online consumer behaviour. For example, delivery services reflect the challenges of rural customers in the local market. The convenience of home delivery shows the importance of delivery services to customers in rural areas. Second, payment security illustrates the convenience of digital payments and technological changes, which is also one of the important factors that encourage rural villagers to use e-commerce. Third, network connectivity helps the internet for online communication, enabling rural consumers to search and enquire with online platforms. These results suggest the interaction of delivery service, payment matter and network connection in online purchase behaviour. Future research could focus on these three factors as strategies to promote online shopping in rural areas.

Table 4 Summary of research results

Research Objective	Results
To determine the online purchasing behaviour among the Bekok people	Based on the findings of the study obtained in Chapter 4, it has been that the level of performance of online purchase behaviour. The result showed that 240 respondents with a rate of 100% had a high level.
To determine the relationship between delivery service, payment matter, and network connection with the online purchasing behaviour of rural customers	The result obtained from chapter 4 has shown that there is a positive relationship between delivery service, payment matter, and network connection of rural customers in Bekok. Based on the findings of the research, the significant value

obtained is less than 0.05 with a value of $0.000 < 0.05$.

5.0 Conclusion

In conclusion, the objectives and questions of the research were achieved through the findings of the research and analysis of the data obtained. Firstly, the findings display the results of online purchase behaviour of people in Bekok, which is at a high level. Secondly, according to the Spearman correlation coefficient, it shows that there is a positive relationship between delivery service, payment matter, and network connection towards online purchase behaviour. In fact, through these three main factors, we also observed this from the perspective of Bekok respondents, and the results found that people aged 18-50 are at a high rate for online purchases. Therefore, online businesses and local governments should cooperate to implement more strategies in order to let more people in rural areas know about the use of online shopping. Rural customers play an important role in online purchasing and also contribute to e-commerce. Although there is a difference between rural and urban. But through the government's efforts and progress in rural areas over the years, they have strengthened the Internet and helped ensure the use of the Internet. As a result, more and more rural consumers are embracing online purchasing, which eliminates the need for them to go to urban centres to find items, helping to save effort and time. In addition, rural customers can purchase the items they need online. They can shop anytime and anywhere, and villagers do not need to worry about items being left out. At the same time, there is no need to worry about delivery service, because online shopping ensures door-to-door delivery, and they can also choose cash on delivery or online payment. The online platform also provides services that can meet customer needs, such as language and simplicity. This further enhances their desire for online shopping. However, it is not ruled out that there are other difficulties for rural customers towards online purchasing. For example, rural customers still do not believe in online shopping, are afraid of being cheated, afraid of leaking privacy, and so on. In addition, some customers do not use technology and therefore do not shop online. So, each rural area has a different answer to online shopping.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

*The authors confirm contribution to the paper as follows: **study conception and design:** Fan Fui Yin, Siti Anisah Atan; **data collection:** Fan Fui Yin; **analysis and interpretation of results:** Fan Fui Yin, Siti Anisah Atan; **draft manuscript preparation:** Fan Fui Yin, Siti Anisah Atan. All authors reviewed the results and approved the final version of the manuscript.*

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