Important Aspects of Food Home-Business Sales Based on Customer Review in Shopee

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ABSTRACT

Business opportunities are expanding on e-commerce platforms such as Lazada, Shopee, and e-Bay. However, the Shopee app has the highest user statistics in Malaysia, making it the most suitable platform for small traders like B40 (bottom 40% income) women in Malaysia. Many B40 women experience problems identifying suitable products for sale, as well as improving their product quality. A study of customer reviews to identify the most important attributes of online food products was conducted. A Shopee scraper tool was built to acquire a home-business product dataset. Fourteen attributes were analyzed, and the top five most influential attributes were identified for both positive and negative reviews. The results show that the attributes that have the highest overall impact on online home-business food sales are taste, price, appearance, and texture as well as package condition, delivery service, and free gifts. It is noted that daily snacks and side dishes to go with main meals are suitable for year-round sales, while seasonal cookies are usually in demand only during festive seasons.

KEYWORDS

food-product attributes, home-business product, product-review analysis

INTRODUCTION

The convenience of online purchases is increasingly becoming a social norm in Malaysia, where it is no longer foreign among urban or rural communities (Husin & Roslan, 2021) and has become an important trend (Kidane, 2016). This is because online purchases are an easy, fast, and comfortable way to meet the needs and wants of users (Hurriyati et al., 2020). As a result of the increasingly developing digital ecosystem, many industries are driven to conduct business online to increase their growth. From small startups to large enterprises, e-commerce businesses come in all sizes.

Among the most commonly downloaded e-commerce platforms are Lazada, Amazon, Shopee, Taobao, eBay, and Carousell. The use of transparent, safe, and convenient transaction processes in these applications makes users feel confident about conducting transactions online (Huang et al., 2019; Normalini et al., 2019). The Shopee app has become the most preferred shopping app in Malaysia, followed by Lazada, Amazon, and GoShop (Afzainizam et al., 2021). After the world was hit by the COVID-19 pandemic, the use of the Shopee app increased due to the advantages of contactless payment and delivery. In addition, as the Malaysian government has intensified its entrepreneurial development program for B40 women, many of them have decided to start or grow their businesses by marketing their products on the Shopee app.

B40 refers to the group in the bottom 40% of household incomes. B40 women are encouraged to work from home by selling homemade products or becoming dropship agents. Homemade products consume less energy compared to mass production, are better quality, and are unique (Azad & Motlagh, 2014). Home-business products do not require expensive operating costs related to employee wages, property rent, transportation, utility financing, and advertising costs (Nabhan et al., 2021).

A home business is defined as a business whose primary office is within the home, regardless of the size of the office. There are a wide variety of home businesses, such as bakeries, crafts, online retail, soap making, skin care, beauty, and many more. In Malaysia, the most popular business is the production of foods such as biscuits, chips, cakes, cookies, and pastries. It is believed that food-based home businesses improve the well-being and living standards of the local community (Tyas et al., 2019).

Although homemade products are famous in the online business world for their good quality, whether products are really favored by customers depends on several factors. Not all customers have the same experience when purchasing the same type of item due to, for example, differences in the speed of the delivery service, the condition of the package, or the taste of the product.

In this study, data regarding homemade food products such as product name, product variation, price, stock, sales, shop location, product star rating, and product review were extracted from Shopee. The data were stored in a database and used to analyze multiple attributes of food-based homemade products to determine which attributes are most influential on customer satisfaction. The results of the analysis of the data are discussed in the Results and Discussion section.

LITERATURE REVIEW

Homemade Food Product Businesses

A homemade product is a product that is produced entirely by hand or with the help of tools, either manual or mechanical, as long as the majority of the final product is created by the maker's own efforts (Gaikwad & Shiware, 2013). Because they are not mass-produced, every homemade product has its own uniqueness, creativity, and attractiveness to customers (Hsu & Ngoc, 2016). However, starting a homemade-product business requires many preliminary processes and steps that require a large investment of time, effort, and money, especially in marketing costs. Therefore, starting a homemade-product business is likely to be difficult for those in the B40 community to achieve. However, technology has evolved to open more opportunities for people to do business online. Due to the creation of multiple e-commerce platforms such as Lazada, Shopee, Taobao, and Amazon, product marketing is now much easier and cheaper. Thus, homemade products can reach people across the country in a short time.

The economic trend toward homemade food businesses is growing in popularity, and most e-commerce platforms are now easy to use (Carpio & Lange, 2015). Today, anyone who likes to cook or bake has the opportunity to run a homemade-food business with minimal start-up capital and risk (Ibrahim & Mansor, 2022). However, running a cooking or baking business from home has its own challenges. Most home cooks and bakers have other responsibilities such as parenting,

attending lectures, working other jobs, running the home, and so on. One of the challenges for them is lack of resources and time (Edralin, 2012; McGuffin et al., 2015). Unlike a person who works in the food and beverage industry, the individual must face and cope with these challenges. Therefore, if home cooks and bakers want to start a business, they need to have the determination to compete with restaurants, bakeries, and street vendors to raise awareness of their own products through food-product quality, good appearance, and affordable price.

The food sold through e-commerce must be sent through a delivery service, which usually requires a minimum of three days to reach its destination (Sofiah & Mayori, 2021). There are only a few categories of food that can be sold like this, where the food must last for weeks or months without going bad or sustaining damage (Law et al., 2022). Among them is the baked-goods category, namely bread, pastries, low-acid fruit pies, cakes, and cookies. Other categories are candy, such as hard candies, chocolate, and caramels, and preserved goods such as jams, jellies, and pickles. In addition, sellers can sell condiments such as honey, syrups, mustard, and vinegar. Popular snacks such as granola, pretzels, and popcorn can also be sold online. Therefore, a seller needs to make a wise decision when determining the type of product to be sold before attempting to commercialize it on an e-commerce platform.

Important Attributes of Online Food Product Sales

According to Hadi (2021), product attributes can be defined as elements that are considered important by consumers and used as a basis for making purchase decisions. A seller must pay close attention to the product attributes so that customer satisfaction can be achieved. Attention to the attributes of the product will indirectly affect the relationship between the business and the customer. As stated by Solomon (2018) and Puspaningrum (2018), there are several product attributes that need to be taken into consideration, including branding, packaging, labeling, color, quality, design, warranty, and service. Size and price can also be considered product attributes. The attributes listed here majorly influence the purchase decision of the customer. This means that if a homemade-product business wants to gain the trust of its customers, it needs to take care of the relevant product attributes.

Product attributes are important because purchase failure can be driven by missing or unclear product-attribute information. Customer confidence will be reduced if incomplete product information is displayed. For example, customers may not be interested in buying a food product that does not specify its size and flavor. The same goes for other product categories such as apparel; a seller that does not give the color, pattern, and brand of the item may not gain customer confidence. As mentioned by Jeon et al. (2021) and Rasmikayati et al. (2021), one of the ways to gain an advantage against the competition is for the seller to provide enough satisfaction that the customer is willing to repeat their product purchase, guaranteeing continuity of sales.

However, the attributes of food products are very different from those of other products such as apparel, electronics, and gadgets. According to previous studies by Bennur et al. (2013) and Wang et al. (2022), apparel products have attributes such as fit, design, fashionability, quality, workmanship, versatility, price, and brand, while according to Wang et al. (2018), electric appliances such as washing machines could contain attributes such as brand, type, control mode, weight, and price. This clearly shows that not all product attributes are the same as those of food products, but general attributes such as price and brand are a must in product details. Rothenberg and Matthews (2017) stated that a reasonable price is also very much a concern of buyers. According to Harris et al. (2015) and Auf et al. (2018), price is one of the key attributes that is essential.

Food products exhibit attributes such as sensory quality and nutritional quality (Symmank, 2018). Sensory-quality attributes, as described by Asmalovskji and Sadilek (2016), can be defined as color, flavor, texture, size, shape, appearance, and freedom from defects. Nutritional-quality attributes include vitamins, minerals, protein, energy, carbohydrates, fat, and fiber. Curtis et al. (2018) maintained that food labeling must also be included for food products. According to Sadilek (2019), enhancing the

value of the food product will increase customers' perception of product quality. This shows how important product attributes are in selling, especially food products.

Important Attributes for the Online Seller

Because products sold online involve three elements, namely the seller, the buyer, and the product, the characteristics or attributes of the seller are also important to the level of customer satisfaction. This is because attributes such as delivery service, item packaging, and chat services will be observed and evaluated by customers. Even if the product sold is of good quality, customers may feel unsatisfied and less likely to shop from the same seller again if the service received from the seller is bad. Therefore, in addition to product attributes, seller attributes can be focused on for the food product marketed online. Previous researchers, such as Solomon et al. (2018), Puspaningrum (2018), Gupta et al. (2019), and Qadry and Yasri (2019), have stated that package condition is important because packaging is the first thing customers see when the product arrives in their hands. The seller needs to make sure that delivered products are packed securely, especially for fragile products such as thin plastic and glass or easily dented containers. These products require more secure packaging, such as bubble wrap or plastic air bags.

Gupta et al. (2019) and Vasudevan and Arokiasamy (2021) stated that delivery service is important and can build the trust and confidence for people to continue online shopping. This is because a delivery service that is fast and secure will give high satisfaction to customers and potentially make them leave a positive review towards the product purchased. Thereby, people's trust and confidence can be built through the influence of the previous buyer's experience. It will most likely attract the interest of new buyers based on the trusted delivery service. Plus, customers prefer to receive their delivery as quickly as possible as certain products might have expiration dates that needed to be shipped within a strict timeframe. But if customer receives a wrong order from the seller or does not receive the order at all, it will cause negative emotions such as anger, disappointment, and sadness which should be avoided by every business (Nagar & Gandotra, 2016; Mathur, 2015).

However, Qadry and Yasri (2019) explained that even if the delivery service is bad, the seller having a good personality will positively impact customer satisfaction, which can lead to good product-rating reviews by customers. A good seller personality refers to the attitude of the seller throughout the transaction process. In online shopping, sellers' attitudes can be assessed through the chat service, such as whether they respond to the chat quickly or whether they respond to the chat in a nice way. Things that are often discussed between customers and sellers are product information inquiries, asking for solutions from sellers, giving feedback, getting to know sellers, bringing in other potential customers, and socializing (Koponen & Rytsy, 2020).

Adrian and Rostiani (2021) state that giving free gifts with customer purchases can indirectly provide satisfaction and joy. With this small gift, customers potentially will repeat their purchases at the same store in the future. Zhu et al. (2015) also state that a free gift is a marketing tool that can play a role as a psychological influence after the purchase of online products.

In summary, seller attributes can be divided into five attributes, namely, package condition, delivery service, seller's attitude or chat response, wrong or missing order, and free gift.

METHODOLOGY

To analyze the attributes of online home-business food sales, this study was carried out in five stages. In the first stage, an automated tool for scraping information about Shopee products was built. Second, data about selected products were extracted from Shopee. Third, the collected raw customer-review data were cleaned. Fourth, the customer-review data were analyzed and lastly, the analyzed data is summarized and discussed to have better understanding regarding important attributes of online home-business food sales.

Development of the Shopee Scraper Tool

In this study, an automated Shopee scraper tool was developed as the first step of the process to extract and gather information on Shopee products. The extracted data focused on home-business food products such as moon cakes, brownie cookies, and meat floss. During a period of one month, the developed scraper tool successfully collected 14,422 pieces of food-product data; information related to sellers as well as product reviews were also recorded. To scrap the desired product information, product URLs which are based on Shopee website need be provided first. Then, one product URL is selected and inserted into the tool to start the process of data scraping. The tool will scrape the entire specified website to extract data and considered done once the scraping process is completed. This process is done repeatedly by inserting the product URLs one by one into the tool until all the required product data has been collected. Next, the tool outputs all the data that has been collected in a file that is more useful for users, which is in the form of an SQL-format file. With the automated tool, research can be done more quickly, easily, and efficiently, as it can store the extracted data directly in the database and export them into an SQL file. The raw extracted data can be found on the GitHub site under the repository of HomeBusinessProduct for the use of other researchers. Figure 1 shows the interface of the developed tool.

This tool stores the data in the database by putting them into seven data tables, namely stores, products, product_attributes, product_models, product_variations, product_reviews, and product_ ratings. However, not all product information is necessary for this study. The classified data tables allow the researchers to select the desired data from the database using query processing. The structure of the data tables in the database are illustrated in Fig. 2.

Additionally, these data contain local products originating from Malaysia, particularly homemade food products in five product categories, namely cakes, cookies, crackers, food pastes, and snacks. From the five product categories, 13 types of products were gathered as samples for product-attribute analysis purposes. Table 1 shows the list of collected products from the Shopee Malaysia app.

Based on the product list information from Table 1, meat floss has the highest number of products, which indicates that it is one of the most popular homemade food products on Shopee Malaysia. Meat floss has the highest sales and contributed many product reviews for this study. However, Batik cake is also seen to be one of the famous homemade foods, as there is a Batik cake product that holds the highest number of reviews (2,505). Plus, it can be said that steamed fruit cake, brownie cookies,

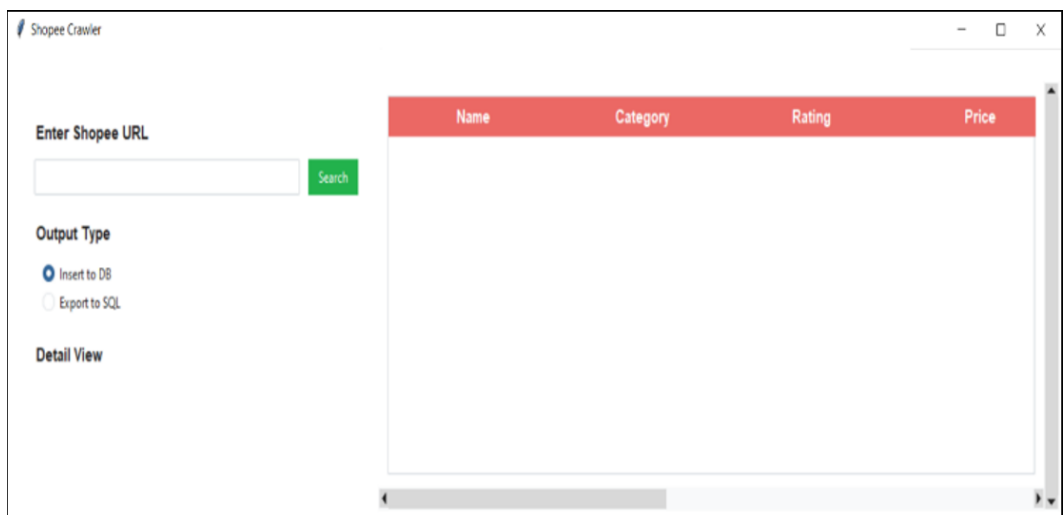**Figure 1. Interface of developed tool**

Figure 2. Extracted product data in database

name	stock	price	sold	comment
BROWNVO Brownie Thin 26g(FREE 🎁 FOR ABOVE RM40 & ...	466	4.95	2	Nice crispy brownies cookies but only a few pieces...
Crunchy Brownies Cookies Big 180g++ Less Sweet Fre...	247	18.0	2600	Alhamdulillah. Cookies dah sampai. Sampai² terus b...
Crunchy Brownies Cookies Big 180g++ Less Sweet Fre...	247	18.0	2600	Quality:Very good Taste:Very good, light & crunchy...

Table 1. The extracted product list

Product Type	Product Category	Number of Products	Number of Products Sold	Total Number of Product Reviews	Lowest Total Number of Reviews per Product	Highest Total Number of Reviews per Product
Batik Cake	Cake	727	8,472	4,067	1	2,505
Steamed Fruit Cake	Cake	1,252	6,215	3,692	1	970
Moon Cake	Cake	703	1,597	832	1	384
Almond London Cookies	Cookies	802	6,980	3,584	1	1,002
Bangkit Cheese Cookies	Cookies	277	1,617	676	2	154
Cadbury Tart	Cookies	310	370	548	1	258
Batang Burok Cookies	Cookies	413	16,234	6,687	1	1,002
Brownie Cookies	Cookies	1,757	4,878	1,472	1	221
Florentine	Cookies	1,001	8,990	3,248	1	375
Nut Rempeyek	Cracker	1,022	4,120	3,296	1	1,013
Onion Crackers	Cracker	1,180	7,867	6,293	1	2,330
Spicy Anchovies	Food Paste	1,664	31,120	17,672	1	2,212
Asam Pedas Paste	Food Paste	259	1,123	786	3	361
Meat Floss	Snacks	3,055	36,751	21,050	1	2,394

florentine, nut rempeyek, onion crackers, spicy anchovies, and meat floss are the popular products, as they have high product numbers on Shopee.

However, there is a huge gap in the total products sold for spicy anchovies and meat floss compared to the other products. These two products recorded the highest sales. This means that consumers often buy these two types of food, as they can be consumed regularly as a side along with their daily meals. On the other hand, products that have the lowest sales are Bangkit Cheese Cookies, Cadbury Tarts, and Batang Burok Cookies. This is because these products are seasonal cookies that are rarely eaten on a daily basis but are famously eaten during the celebration of Eid al-Fitr in Malaysia. Thus, the recorded sales of the cookies are not impressive. Hence, sellers should consider focusing on selling food products that are suitable to eat daily as their main business and make seasonal cookies a side product, as there could be high demand during the festival season.

Data Cleaning

This study aimed to identify important product and seller attributes that influence customer satisfaction using customer feedback data. Therefore, only product information and product review data were required for the analysis process. SQL queries were made on the database to extract data from products and the product_reviews table. As the product reviews were extracted directly from Shopee, they

were raw and needed data cleaning. The unnecessary characters such as symbols, punctuation marks, and digits in the product-review text had to be removed to simplify the analysis process later. Plus, because the customer reviews were taken from Shopee Malaysia, they were written in both Malay and English. Thus, language standardization was also needed in this process.

Data cleaning was first done using the Python programming language by initially converting all the text data into lowercase text. Next, the text was separated into words. The removal of punctuation and digits from the text was run repeatedly until the dataset was clean of any unwanted text characters. Next, as the written reviews were in both Malay and English, language standardization was carried out wherein the Malay words were detected and converted into English. This process was done using DocTranslator, which supports the conversion of Malay words to English. A CSV file format containing the product-review data was simply uploaded and processed by DocTranslator. After that, the resulting file was downloaded for the next analysis activity.

Attribute Analysis

Based on the literature review, there are 14 attributes of the food product and the seller. The attributes of the food product are taste, flavor, expiration date, price, appearance, texture, color, label, and size. For seller attributes, they are package condition, delivery service, attitude or chat response, missing or wrong order, and free gift. To find the most influential attribute in food-based home-business products, words related to each attribute were first identified for analysis of product reviews. Table 2 shows the related words for each product and seller attribute.

After determining the word list related to each attribute, SQL queries were executed to find out the number of product reviews that contained the selected attribute. For example, an SQL query that identifies product reviews that contain the taste attribute within a five-star rating are executed as follows:

```
SELECT products.name, products.sold, product_reviews.comment,
product_reviews.rating_star
FROM products JOIN product_reviews WHERE product_reviews.product_
id = products.id
```

Table 2. Related words with product and seller attributes

Attribute		Related Words
Product	Taste	Taste, delicious, tasty, tasteless, sweet, sour, salty, bitter
	Flavor	Flavour, flavor, version, seasoning
	Expiration date	Expiry, expired, expire
	Price	Price, cheap, expensive, pricier, promotion, discount, RM
	Appearance	Appearance, looks, pretty
	Texture	Texture, soft, fluffy, hard, rough, crispy, crunchy, creamy
	Color	Colour, color, dark, bright
	Label	Label, tag, sticker
	Size/shape	Size, shape, small, petite, thin, big, large, thick
Seller	Package condition	Package, packaging, pack, secure, neat
	Delivery service	Deliver, delivery, shipping, post, fast, slow
	Attitude or chat response	Attitude, behavior, treat, chat, response, message
	Wrong or missing order	Wrong, missing, lost, misdelivered, misplaced
	Free gift	Free, gift, present

```
AND product_reviews.rating_star = '5' AND product_reviews.comment
IN
(SELECT comment FROM product_reviews WHERE comment LIKE '%taste%'
OR comment LIKE '%delicious%' OR comment LIKE '%tasty%' OR comment
LIKE '%tasteless%' OR comment LIKE '%sweet%' OR comment LIKE
'%sour%' OR comment LIKE '%salty%' OR comment LIKE '%bitter%')
```

Based on the query, the total number of product reviews that contain the taste attribute from five-star ratings can be determined. The same process was performed for all attributes where the result of the frequency measure for each attribute was recorded and classified based on their star ratings, which are from one to five stars. These results are discussed in the Results and Discussion section to determine the attribute rankings based on positive and negative reviews.

RESULTS AND DISCUSSION

Product reviews can be divided into two classes, namely, positive and negative reviews. Positive reviews consist of three-, four-, and five-star ratings, while negative reviews consist of one- and two-star ratings. By separating product reviews into two classes, the top attributes that influence positive and negative customer feedback can easily be observed. The most influential attributes are determined by comparing the frequency percentages.

Table 3 shows the results of attribute ranking for positive reviews. Based on these results, the taste attribute has the highest frequency measure and is thus the highest ranked attribute in positive product reviews. It is then followed by product price and texture as well as delivery service, package condition, and free gift. From this observation, it can be said that customers strongly prioritize the taste of a food product over other attributes. Even if the product appearance is not appealing or the package delivery is slow, customers will still leave positive reviews for a tasty food product.

The next attribute that customers value the most is product price; the product must be affordable and reasonable in relation to the quality and quantity of the product offered. After that, the texture of the product must be appealing. For example, a cracker product must have a crunchy texture and

Table 3. Attribute ranking for positive reviews (from 42,019 total reviews)

Attribute		Frequency	Frequency Percentage	Rank
Product reviews (20,941)	Taste	14,651	34.87	1
	Price	2,921	6.95	2
	Texture	1,420	3.38	3
	Appearance	989	2.35	4
	Size/shape	452	1.08	5
	Expiration date	277	0.66	6
	Color	107	0.25	7
	Flavor	83	0.20	8
	Label	41	0.10	9
Seller reviews (21,078)	Delivery service	11,334	26.97	1
	Package condition	7,735	18.41	2
	Free gift	747	1.78	3
	Wrong or missing order	993	2.36	4
	Attitude or chat response	269	0.64	5

not be mushy. As for products such as cakes, they mostly have a soft texture. If the seller is able to produce cakes with a soft and fluffy texture, then customer satisfaction can be achieved.

In addition, other top product attributes that positively influence the product reviews are the delivery service and package conditions. Customers place great emphasis on fast delivery because they prefer to receive packages promptly after the transaction is done. Customers also strongly expect their product to arrive in good condition without any damage. Therefore, thick, safe packaging is important to ensure that food products such as crackers are not crushed or stale.

The next top seller attribute is free gift. A free gift given to a customer for every purchase shows the seller's appreciation for the customer's support. Giving even a small gift can have a positive impact, as it makes the customer feel appreciated. The analysis clearly shows many customers who give positive reviews mention the free-gift attribute.

Table 4 shows the results of attribute ranking for negative reviews. Based on these results, the taste attribute is again ranked first as the most influential attribute for negative reviews. The taste of the product is the first thing that customers will evaluate; when the taste is less liked by customers, it will leave a bad impression of the product. Thus, unfavorable food taste is the main attribute that will cause bad product reviews. The next top attributes that influence bad product reviews are product appearance, product texture, delivery service, package condition, and wrong or missing order.

Product appearance ranked second. Customers form their first impression of the product and its quality when they see its picture online, and they will compare the product's actual appearance when they receive it with the display picture. Bad reviews regarding product appearance tend to mention loss of color, signs of spoilage, and poor visual attractiveness. For instance, a cake product will have a bad appearance if it seems to be dry, is too dense, has a cracked top, is greasy, or has crusty edges.

Next, the product texture is one of the major attributes in bad reviews because most customers stress the food quality, and texture is an important attribute of the quality of a food product. For example, crackers are a crunchy product, but if they are placed in a humid environment or put into an incompletely sealed pack, they will go soft and stale in just a few days, leading to negative reviews.

The fact that delivery service and package condition are among the top attributes for both good and bad reviews clearly shows that customers are very concerned about fast order delivery as well

Table 4. Attribute ranking for negative reviews (from 405 total reviews)

Attribute		Frequency	Frequency Percentage	Rank
Product reviews (227)	Taste	123	30.37	1
	Appearance	28	6.91	2
	Texture	19	4.69	3
	Price	15	3.70	4
	Size/shape	14	3.46	5
	Color	8	1.98	6
	Label	8	1.98	7
	Expiration date	7	1.73	8
	Flavor	5	1.23	9
Seller reviews (178)	Delivery service	82	20.25	1
	Package condition	61	15.06	2
	Wrong or missing order	16	3.95	3
	Attitude or chat response	14	3.46	4
	Free gift	5	1.23	5

as good packaging. Bad reviews regarding delivery are usually due to a slow delivery process or late package submission from the seller to the delivery service. Moreover, the package-condition attribute should be paid attention to because poor packaging can result in product damage. The handling of the packaging is crucial and must be done carefully to ensure no damage is caused. Furthermore, a wrong or missing order creates a big negative impact. Customers will be angry about their missing orders because they have already paid for them. Therefore, this is a mistake that sellers should take care to avoid.

With this, it can be concluded that both good and bad reviews have more or less the same top attributes, namely, product taste, texture, appearance, price, delivery service, package condition, and free gift. Since this study is specifically of homemade food products, individuals who venture into food-based home businesses need to concentrate more on these top attributes to help improve their current products and maximize product quality. By doing so, they will be able to offer the best product features for online products.

IMPLICATIONS

This study identifies the important attributes of online home-business food sales by focusing on the products most commonly traded by B40 women in Malaysia. The reason we chose food products as the scope of the study is because the food business is quite popular among B40 women. Our focus is to increase their product quality and customer satisfaction. In the Results and Discussion section, we explained the attributes of products and sellers that need to be emphasized in every sale by listing the ranking of influential attributes according to their total frequency based on the data review. There it is clearly stated that there are four attributes of food that need to be given the most attention, namely taste, price, texture, and appearance of product, while in terms of seller attributes, they need to focus on delivery service and packaging.

By applying the knowledge gained from this study, B40 women can further develop their products' potential in the online business world. Moving their businesses online can help them sell their products more widely, unlike businesses that are based only at home and known only to the people around them, limiting the number of potential customers.

The increase in sales resulting from the successful improvement of product quality can indirectly improve the standard of living of B40 women. With that, the Malaysian government's hope for B40 women to be active in entrepreneurship can be achieved. Although this study aims to help B40 women in online business, the knowledge gained from this study is not limited to B40 women but can also be used by the public and organizations that are involved in business.

Encouraging Entrepreneurship

Anyone can open a business because there are no prerequisites such as experience needed to become an entrepreneur, regardless of whether that person is a youth or an adult. However, to have a successful business, one must have the necessary knowledge of the business world. This study can encourage more entrepreneurs, especially youths, to start or grow a business on an online platform. Encouraging entrepreneurship provides employment prospects to youth as well as increases economic growth. Gaining knowledge about the important attributes of online food products can help entrepreneurs produce products most likely to be in high demand and contribute to high product sales. Products that are in high demand or have a high sales record will be likely to appear on a user's recommended product list.

If a person already owns a business, this knowledge can contribute to delivering high product quality to their existing customers or to attracting new ones. Furthermore, this study can be used to help entrepreneurs understand the needs, desires, and behavior of customers to plan strategies to attract their interest in the products provided. Therefore, the customer base will probably grow even more.

Business and Management Practices

In business, a product is an item or service that is offered in the market and is designed to satisfy the needs of customers. One of the most significant things in any business is product management, which plays a role in bringing new products to the market or improving existing products. Knowledge of product attributes plays a key role in business growth for every organization. Understanding customers' desires will help them make decisions to improve customer experience, satisfaction, and loyalty. This is because the product attribute can influence the customer's attraction to the marketed product. The higher the emphasis on the attributes of the product and its quality, the higher the tendency of customers is to select the marketed products. The knowledge of important product attributes obtained from this study not only can be used for online businesses but also can be used for businesses that have a physical business site or store. Of course, a large business organization has quite fierce competition and needs a larger potential customer base compared to a sole trader or individual entrepreneur. Therefore, a business manager can apply the knowledge of product attributes in planning a marketing strategy to satisfy the target customers. Marketing decision makers need to understand the customer's needs first and analyze the product features that have weaknesses and need to be upgraded.

In addition, when a business wants to produce new products, it can observe the most influential attributes of the product and do deep quality planning before the product design process to ensure the achievement of market requirements. For example, if price is one of the important attributes of a product, then the organization must come up with proper price policies and pricing strategies. This means that the organization can design products that provide good functionality and quality in relation to the price offered. The price offered should be based on the level of product performance characteristics that are worthwhile and affordable, especially for the public. Furthermore, in business management, understanding product attributes that are prioritized by customers can enlighten the management to troubleshoot and respond to any customer dissatisfaction.

CONCLUSION

B40 women entrepreneurs who make food-based products as their home business often have difficulties in marketing and selling their products. They need to consider food that is suitable to be eaten on a daily basis or eaten with daily main meals, such as spicy anchovies and meat floss, because those types of items have higher potential sales. Daily snack products such as crackers, cakes, brownie cookies, steamed fruit cake, and onion crackers can also be considered because they are suitable to be eaten during work or leisure time. As for seasonal cookies, they are most suitable as side product sales because there is rarely demand for them except during the festive season.

The early product reviews from buyers are very meaningful and important for sellers because they can influence the product's image. Therefore, the seller needs to pay close attention to the product and seller attributes to ensure product quality. This study considered 14 attributes. The product attributes were taste, flavor, expiration date, price, appearance, texture, color, label, size, and shape, and the seller attributes were package condition, delivery service, attitude or chat response, wrong or missing order, and free gift. Based on the results of the study, among the 14 attributes listed, there are seven top attributes that need extra attention, as they have higher potential to influence buyers in terms of positive or negative product perception. The attributes that need to be emphasized are taste, texture, appearance, price, delivery service, package condition, and free gift. By taking care of these attributes, the seller has a greater chance of getting a five-star rating and good product reviews. Indirectly, a good product review will attract more buyers to purchase their products and increase the store's rating on the Shopee app. Therefore, it can be concluded that these seven important attributes should be taken seriously for food products, especially for B40 woman who are new to or are currently engaged in home businesses in Malaysia.

With handmade-food product data from Shopee Malaysia, various studies can be conducted in terms of sentiment analysis, product recommendation, market analysis, competitor analysis, and many more. So that other researchers can access the data, this dataset can be found on the GitHub site under the repository of HomeBusinessProduct.

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