The effects of social media influencers, social media advertising, e-wom, and lifestyle towards purchase intention and brand image as a moderating variable in e-groceries

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Abstract

Social media has developed into an exceptional tool for everyone to generate marketing goods, services, and information sharing. This evolution of digital marketing is called eWOM, and it has created a new profession for users known as social media influencers. This research strives to demonstrate the effectiveness of influencers, advertisements, eWOM, and lifestyle as tools to build brand strength and purchase intention of ASTRO (Indonesia’s first quick commerce company that delivers groceries and essentials within 15 minutes). This empirical study utilized a quantitative research method and distributed questionnaires to the respondents. The study found that brand image and purchase intention have a significant impact on consumer behavior, while social media advertising, influencers, and eWOM have less of an impact.

Keywords: social media influencers, social media advertising, eWOM, purchase intention, brand image.
Abstrak
Media sosial telah berkembang menjadi alat yang luar biasa bagi semua orang untuk menghasilkan barang pemasaran, layanan, dan berbagi informasi. Evolusi pemasaran digital ini disebut eWOM, dan telah menciptakan profesi baru bagi pengguna yang dikenal sebagai influencer media sosial. Penelitian ini berupaya untuk menunjukkan efektivitas influencer, iklan, eWOM, dan gaya hidup sebagai alat untuk membangun kekuatan merek dan niat membeli ASTRO (perusahaan perdagangan cepat pertama di Indonesia yang mengantarkan bahan makanan dan kebutuhan pokok dalam waktu 15 menit). Penelitian empiris ini menggunakan metode penelitian kuantitatif dan menyebarkan kuesioner kepada responden. Studi ini menemukan bahwa citra merek dan niat membeli memiliki dampak yang signifikan terhadap perilaku konsumen, sedangkan iklan media sosial, influencer, dan eWOM memiliki dampak yang lebih kecil.

Kata Kunci: influencer media sosial, iklan media sosial, eWOM, niat beli, citra merek

1. Introduction
The COVID-19 pandemic compelled people to stay at home and restricted their mobility. It changed the various habits and lifestyles of humans and created more online activities. Government-imposed mobility restrictions aimed to control the spread of the virus. Since the virus arrived in Indonesia on March 2, 2020, the government has put in place various policies to restrict certain activities (AHK Indonesian, 2021). Furthermore, studies by Anwari et al. (2021), de Haas et al. (2020), and Irawan et al. (2021) have observed a notable increase in online activities.

There is an emergence of e-commerce adapted by new companies, a massive number of customers, and new venture firms, including online groceries (Al hawari, Balasa, & Slimi, 2021). Through this phenomenon, new innovative applications have been emerging providing services for consumers’ daily necessities by delivering services. The pandemic has developed a habit toward offline shopping at supermarkets or mini markets into shopping for daily necessities online also known as e-groceries. It has been proven that more people are buying their food through e-groceries since the pandemic, and that social distancing is a key factor in their decision to shop online (Yelamanchili et al., 2021). It turns out that this phenomenon has become a lifestyle and has continued even when the pandemic has subsided. Since online shopping has been popular, it has become the fourth industrial revolution.

There is a change in consumer behavior to shop for online groceries. Amid the pandemic, a limited number of studies have investigated the behavior of consumers who shop online for groceries and meals (Beck & Hensher, 2020; Figliozzi & Unnikrishnan, 2021; Habib & Hamadneh, 2021; Silva et al., 2021). Previous research has indicated that the choice to shop online is significantly influenced by the product category, such as daily necessities, groceries, electronics, fruits, and vegetables (Dias et al., 2020; Figliozzi & Unnikrishnan, 2021). Online grocery shopping involves purchasing grocery items through a retailer’s website and having them delivered directly to the consumer’s home (Morganosky & Cude, 2000).

Ride-hailing services in Indonesia are not limited to transporting people, as they also offer delivery services for goods and documents (Irawan et al., 2021). Additionally, Choudhury (2019) noted that ride-hailing companies in Indonesia earn more profit by providing delivery services than from offering ride-hailing services for transportation purposes. Ride-hailing drivers in Indonesia receive orders from customers through a smartphone application and utilize motorcycles to promptly deliver various goods, including groceries and food, directly to the customer’s home.
customer’s location. From the industry side, this phenomenon can be used as an opportunity for a new business model that has its own market. One of the services is the Astro application.

Astro (Indonesia’s first quick commerce company that delivers groceries and essentials within 15 minutes) is an application that offers a supportive lifestyle by providing consumer necessities more efficiently, compared to other online services. Astro provides a unique service which delivers your needs in only 15 minutes, hence building their own brand image. To accelerate the strengthening of the brand image, Astro also needs social media assistance. Social media plays a bigger role in daily communication and is quickly overtaking other channels. Astro utilizes its official website https://www.astronauts.id/, and social media such as Instagram and Facebook with the official account @astronauts.id and the YouTube account astronaut_id. Through this platform, Astro spreads information and many kinds of benefits and promos that they offer.

Nowadays, users are spending more time on social media sites, where they can share and learn about other companies, goods, and services. In the process of marketing communication, where users have grown to play a significant role in the communication, social media platforms that enable two-way communication between consumers and brands have emerged. Interactions on social media can affect a consumer’s choice to purchase as well as increase their awareness of a product or brand. Consumers’ shared information has a significant impact on their purchasing decisions, their behavior after making a purchase, and their experiences in utilizing a product or service (Maria et al., 2019). According to De Valck et al. (2020), instead of brands, customers largely rely on information offered by other consumers. Therefore, this behavior and information has developed as people adapt and engage with advertising within the social media platform.

From a brand communication viewpoint, brand image plays a crucial role in the process of brand development. It is not solely created to encourage product purchases, but it is also done to influence how the target audience, i.e., consumers, interpret and decode brand messages. This interpretation ultimately impacts the way consumers integrate the brand into their self-concepts and reality. The development of social media has created many benefits and opportunities for various new jobs or professions that had not existed before. Social media has become an extraordinary medium that is used massively to share information, and it is also used for marketing a product or service. From here, a new profession began to emerge for those called social media influencers (Wijaya, 2013).

Social media influencers are third-party actors who, through content creation, content distribution, engagement, and personal appearance on the social web, have developed a sizable number of pertinent relationships with and influence over organizational stakeholders. Thus, we define strategic social media communication as the deliberate application of communication by businesses or social media influencers in which social media influencers are addressed or perform tasks strategically important to corporate objectives. By exploring related ideas and outlining the strategic action sector that has developed around strategic social media influencer communication, we then place these definitions within the larger context of strategic communication (Borchers & Enke, 2021). The research also concluded that the characteristics of social media influencers may be crucial in determining the behavioral intentions, such as purchase intentions, of their followers (Kurdi et al., 2022).

Over the past ten years, online buying has increased. Online grocery shopping has increased as a result of the COVID-19 pandemic's restrictions on consumer activity and circulation due to fears of getting the virus. Online grocery shopping is a type of internet shopping done through e-commerce websites or mobile apps for food and other home supplies. Studies on online grocery buying began in the 1990s when the high-tech age emerged and started using the convenience of online shopping to make their lives easier. The perception of
value by the consumer includes a satisfying experience that influences their decision to keep shopping online. A favorable experience with online grocery shopping has been shown to have a beneficial impact on future purchase intentions, according to the food literature, which has endeavored to identify the factors that affect acceptability and intention to continue shopping online (Gomes & Lopes, 2022).

Electronic word-of-mouth, often known as eWOM, is a type of digital marketing. eWOM is one of the promotional tools used to enhance brand image. Through eWOM, consumers become aware and recall a product or brand. Brands and social media influencers play a vital role in the marketing strategies used to create eWOM to achieve an ideal impact, lowering the possibility of negative consumer responses. Research tends to explore the value and overcome potential marketing issues by observing cultural barriers, commercial rivalry, and personal contents (Halvorsen et al., 2013).

When consumers see selling points from media influencers and receive positive eWOM from a brand ambassador through social media, it is beneficial in building positive perceptions toward brands and creating a positive brand image, which will ultimately influence customers in strengthening their purchase intention. Although this is not the main factor to make consumers buy, through this pattern it can lead to thinking and convince consumers more about their preferences for goods or services from the brand. Previous research has not been conducted on the variables of Social Media Influencers, Social Media Advertising, e-WOM, and Lifestyle affecting brand image which influences purchase intention in the new player in the ASTRO eGrocery online industry which is present in 2021. In order for ASTRO to develop its business quickly and be able to get more consumers, it is important to know what variables and indicators are needed by consumers.

The rapid growth of digital development, coupled with the impact of the COVID-19 pandemic, has significantly changed consumer behavior and purchasing patterns. The rise of e-commerce, exemplified by platforms like Astro, which offers ultra-fast delivery in 15 minutes, has led to a focus on building brand image and brand awareness. Social media has played a pivotal role in this transformation, with digital marketing becoming increasingly influential. Marketers are leveraging social media to enhance brand image and influence purchase intentions. Today, companies understand the significance of social media influencers, word-of-mouth, and electronic word-of-mouth in shaping their marketing campaigns. However, there remains a research gap in understanding these factors' impact on grocery purchase intentions in Indonesia. This study aims to explore the effectiveness of influencers, advertisements, eWOM, lifestyle, and brand image in building a strong brand image, which, in turn, influences people's purchase intentions when using the application.

Previous research discussed the evolution of the online grocery shopping experience during the COVID-19 pandemic (Gomes & Lopes, 2022; Pauzi et al., 2017; Nurhasanah et al., 2021). We aim to study the effects of social media influencers, social media advertising, eWOM, and lifestyle towards purchase intention and brand image as a moderating variable in e-groceries, specifically in Indonesian e-groceries, ASTRO, as it has not been studied yet.

Thus, from this phenomenon, a question is derived whether the impacts of social media advertising, in conjunction with social media influencers and eWOM, has beneficial impact towards lifestyle and brand image, and has a positive impact on purchase intention. Furthermore, the objectives of this research are also to comprehend the effects of social media advertising on brand image, examine the influence of social media influencers on brand image, assess the impact of eWOM on brand image, look at the influence of lifestyle on brand image, and discover the impacts of brand image on purchase intention.
2. Theory and Hypothesis

E-Groceries

E-commerce, or Electronic Commerce, refers to the practice of buying and selling goods or services through computer networks, like the Internet. This form of trade relies on various technologies, including mobile commerce, electronic funds transfer, supply chain management, online marketing, processing online transactions, electronic data interchange (EDI), inventory management systems, and automated data collection systems (Shahriari, et al., 2015). According to Jagani (2020), E-grocery e-commerce is a retail strategy centered around the online sale of groceries, emphasizing increased shopping convenience and swift delivery. E-grocery customers are particularly attentive to the freshness and quality of perishable items, as well as the availability of essential products they require. Due to its simplicity and quick transactions, shoppers avoid traditional purchases to avoid overcrowding and long queues, instead preferring to buy groceries or daily necessities online.

The definition of e-grocery shopping, based on IGI Global, is a form of business-to-consumer e-commerce with the main objective of online grocery shopping. It emphasizes client satisfaction, easy purchasing, and prompt door-to-door delivery. The COVID-19 pandemic had a significant influence on travel in 2020, including commutes, in-person shopping, and food industry operations. Previous routine activities before the pandemic, such as buying groceries and household supplies, had a significant change as a result of the new social barriers put in place to stop the spread of COVID-19 (Abou-Zeid, 2021). Currently, e-commerce sales in the US have increased dramatically. Online grocery delivery and pickup services have experienced exceptional growth. Martin et al. (2019) also stated that considering that consumers can buy the goods they require from the comfort of their homes or offices and at a convenient time, e-grocery shopping is currently gaining popularity. Deliveries and product availability are the biggest challenges for e-grocery businesses. Moreover, it appears that general consumer satisfaction is fairly low. Hence, the lack of research that examines the relationship between brand image and e-groceries is one of the reasons we conducted this research (Lodni et al., 2021).

Brand Image

A brand, although intangible, plays a pivotal role in defining a company's identity (Davis and Bojalil Rébora, 2002). According to Mohsin (2009), a brand is the perception within a customer’s mind that no other product or service in the market closely resembles yours. When customers find aspects offered on brand pages through social media engaging, this feeling of enjoyment becomes a valuable means of forging a favorable connection tied to their experience, ultimately leading to a stronger identification with and acknowledgment of that brand (Liu and Arnett, 2000). This psychological bond is reinforced by the perceived value that the brand offers. One crucial aspect of a brand’s value is its image, which communicates the brand’s significance to consumers. Kotler (2005) defines an image as the collection of perceptions, beliefs, and ideas that an individual associates with an object, such as a brand. Therefore, when we refer to a brand's image, we are talking about the mental picture that consumers form based on their own unique beliefs, ideas, and impressions. All of these definitions suggest that a brand image is a reflection of how consumers interpret a brand, and it is something that develops naturally. Additionally, each individual consumer may have a different image of a brand, meaning that a single brand can have multiple images, as pointed out by Low and Lamb (2000).

The importance of a strong brand, as it can reflect consumers’ preferences, indicating that an organization has a good grasp of its target audience (Hewer, Brownlie & Kerrigan, 2013). Consequently, the brand becomes a means of achieving recognition and status through the strategic management of identity. The corporate image of a company is shaped by various
factors, such as the company’s name, logo, mission and vision statements, organizational culture, range of products or services, advertisements, and the appearance of the corporate headquarters building. The perception of a brand image in consumers’ minds is influenced by factors such as favorability, strength, and uniqueness of brand associations (Mitra & Jenamani, 2020). In other words, if the aim of the brand is to gain recognition, then brand equity refers to the value that the brand brings to a product in the market through its name, image, and awareness created among consumers (Chen, 2011; Jara & Cliquet, 2012).

Brand images are a description of a brand when it comes to our minds such as a bunch of ideas, beliefs, and impressions that every individual has when it comes to thinking about a brand (Budiono et al., 2021). Companies have a tremendous motivation to create a strong brand image in consumers’ heads when they hear about the company due to the significance of brand images. A positive perception of a brand’s image creates an assessment that some brands are superior to others. There is a definite correlation between brand image and the investor’s purchase intention (Wang & Tsai, 2014).

Social Media Advertising

Marketing is defined as “A social and managerial process by which individuals and groups obtain what they need and want, through creating and exchanging products and value with each other.” (Kotler, 2005). Kotler & Keller (2016) describe the variables of the marketing mix that commonly used today are the 7Ps (product, price, promotion, place, people, process, and physical evidence).

Social media are defined as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content” (Kaplan and Haenlein, 2010). Social media, in a marketing context, is viewed as a tool that facilitates the formation of networks and the exchange of information and emotions among people (Kaplan & Haenlein, 2010). Because they are characterized as “dynamic, interconnected, egalitarian, and interactive organisms” (Peters et al., 2013), social media has brought about three major transformations in the market. To begin with, social media provides a means for businesses and consumers to interact and participate in ways that were previously impossible. These interactions are facilitated by different platforms, such as social networking sites (like Facebook), microblogging sites (like Twitter), and content communities (like YouTube), which allow people to build social networks based on shared interests and values (Kaplan & Haenlein, 2010).

Social media was essential in getting the word out about the COVID-19 pandemic as it spread around the globe. Social media transmitted information about the virus the fastest among digital tools, according to research, which helped target and inform audiences, such as front-line employees. Social media was essential for spreading information after the COVID-19 outbreak broke out over the globe. Advertisers apparently prioritize online engagement when developing social media ads and use this metric to assess the effectiveness of social media advertising. Key indicators of online participation include quantitative measurements offered by social media platforms like “likes”, comments, shares, and clicks.

Social Media Influencers

They are well-known online personas with lots of followers whom they have influence over (Balaban & Mustatea, 2019). Social media influencers can be found across one or several social media platforms such as YouTube, Instagram, TikTok, or any other personal blogs. Social media influencers are seen as a communication tool that can give consumers product information (Saini et al., 2021). Social media influencers can persuade others because they may offer their opinions on any product, spreading information about it online. In today’s Internet age,
electronic word-of-mouth is crucial since it helps a brand build a specific kind of image. Social media influencers can affect any brand’s image in this way.

Companies can leverage influencers as a marketing tool and social relationship assets to achieve marketing success. Influencers on social media are trusted by people who seek guidance in their decision-making process. They have established their reputations and have expertise on a particular topic by regularly posting about it on their preferred social media channels. As a result, they attract a large and enthusiastic following of engaged individuals. For instance, if an Internet celebrity creates a YouTube video promoting a food manufacturer and shares it on one’s own channel, it is considered influencer marketing.

Influencer marketing refers to the partnership between a brand and an influencer, who uses various media channels like Instagram and YouTube to endorse the brand’s products or services. It is important to differentiate between celebrity marketing and influencer marketing, since influencers need to gain the trust of a specific community and maintain a dedicated following.

eWOM

eWOM as an ongoing exchange of information among potential, current, and past consumers regarding a particular product, service, brand, or company is referred to as online word-of-mouth (Ismagilova et al., 2020). This exchange takes place over the Internet and is open to a broad audience, including individuals and organizations. eWOM offers new techniques to record, analyze, evaluate, and manage the impact of marketing communication in hospitality and tourism while using Internet marketing to target large-scale markets (Susilowati & Sugandini, 2018). eWOM positively and significantly influences brand image (Pratiwi & Yasa, 2019).

The interactions between firms and customers have been revolutionized by social media, which has had a profound impact on the way they interact and influence each other. Through both active communication and passive observations, social media allows for social interactions that can significantly impact the choices and consumption behaviors of individuals (Chen et al., 2011). Muller and Peres (2019) argued that social interactions rely strongly on the social network structure and provide firms with measurable value (also referred to as “social equity”).

Purchase Intention

Behavioral intention is the most influential predictor of behavior according to the theory of planned behavior (Ajzen, 1991). One of the key indicators that marketing managers use to anticipate future sales and evaluate how their actions will affect consumers’ purchasing behavior are the identified purchase intentions of consumers. Utilizing idea and product tests, purchase intentions are often used to analyze consumer demand for new items (Morwitz, 2012). Purchase intention is what defines a customer’s willingness and intention to engage in online purchasing behavior (Meskaran et al., 2013).

Applying a marketing strategy using social media influencers may lead to a favorable association with the brand image because the content published on social media is more effective at influencing consumers’ behaviors and purchase intentions (Hermanda et al., 2019).

Conceptual Framework

Based on the explanation of the relationship between research variables as stated in the previous section, an overview of the research conceptual framework can be presented as follows:
A hypothesis is an unproven statement or proposition about a factor phenomenon that piques the researcher’s interest. The hypotheses listed below will be tested to find answers to the research questions. The hypotheses proposed in this study are based on the theoretical framework, which is a quick solution to the problem.

A social network site (SNS) advertisement which contains text, photo, and video content has a great ability to build and improve the brand image through social media (Kathiravan, 2017).

**H1**: Social media advertising exposure has a positive impact on brand image

Ohanian’s (1990) Source Attractiveness Model (SAM) suggests that the more attractive and credible the endorser is, the more interesting the message delivered will be. Hariyanti and Wirapraja (2018) also noted that social media influencers can enhance sales and establish a positive brand image among consumers.

**H2**: Social media influencer trustworthiness has a positive impact on brand image.

With the growing popularity of Instagram and its accessibility through smartphones and other devices, electronic word-of-mouth (eWOM) has become a powerful and influential source of information (Thoumrungroje, 2014). Jalilvand and Samiei (2012) also supported the notion that eWOM significantly affects a brand’s image, with positive eWOM contributing to the development of a strong brand image. Setiawan’s (2014) study revealed that eWOM has a direct effect on destination image and an indirect effect on satisfaction and loyalty, which is mediated by the destination image.

**H3**: eWOM has a positive impact on building brand image.

According to research by Cretu and Brodie (2007), a brand that has a strong image tends to have a greater likelihood of consumers being willing to pay premium prices for its products or services. This positive association is often because consumers perceive the brand as offering unique benefits and having a high level of quality, as noted by Hyun and Kim (2011). By creating a distinctive image, a brand can establish itself as valuable and occupy a specific position in the minds of consumers, which can contribute to the development of brand equity.

**H4**: Building a brand image has a positive impact on purchase intention.
3. Method

Methodology and Data Collection Technique

The methodology and data collection technique for this research used a quantitative research model. According to Goertzen (2017), a quantitative research method focuses on collecting and analyzing numerical data. In addition, according to Rahi (2017), this method focuses on data collection from a large group of the population, ignoring individuals’ emotions and feelings. The quantitative method is a scientific method based on measuring problems by identifying the surface of human behavior in general and generating it into data with beneficial findings.

The study took place for a month in February 2023, utilizing a survey approach in which structured questions were designed for each variable in a sequential manner. This study was administered through an online survey using Indonesian language. The questionnaire consisted of 7 sections: (1) screening test, (2) demographic characteristics, (3) social media advertising, (4) social media influencers, (5) eWOM, (6) brand image, and (7) purchase intention using the Google Forms platform. Screening test was included into the questionnaire to ensure that participants met the inclusion criteria essential for this study. The screening questions were designed to filter out individuals who did not meet the inclusion criteria, which are those who are aged over 18 years old, have and use social media, has shopped for groceries online, used the ASTRO application, currently residing in the Jakarta or Tangerang area, and has seen digital advertising from ASTRO online. Participants who answered "no" to any of those screening questions were excluded from the sample, ensuring that the participants included in the study met the inclusion criteria for the research. A few adaptations were done to the questions in order to align with the research objectives and context (Table 1). Then, the questionnaire was distributed in a form of e-link through messaging applications such as Line and WhatsApp, and the data collected was then analyzed using SmartPLS software.

Table 1. Variable Operational Definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Construct</th>
<th>Indicators</th>
<th>Questions</th>
<th>Sources</th>
</tr>
</thead>
</table>
| Social Media Advertising | Social media advertising (SMA) is a form of paid, non-personal communication that employs social media platforms as a channel to persuade or influence users | Accessible Informative Engagement Entertaining | SMA1. ASTRO present informative digital advertising  
SMA2. ASTRO's Digital Advertising often appears on social media  
SMA3. ASTRO's digital advertising attracts the attention of users  
SMA4. ASTRO's Digital Advertising encourages users to engage in activities (example: Quiz, Survey, Like, Comment, Follow, etc.) | Huo et al., 2020, Dahlen (2005), Logan et al. (2012) |
| Social Media Influencer | A social media influencer is a content generator: who has a status of expertise in a specific area, who has cultivated a sizable number of captive | Trustworthiness Credible Attractiveness         | SMI1. I use ASTRO because ASTRO is widely used by influencers  
SMI2. ASTRO uses trusted influencers  
SMI3. ASTRO uses credible influencers | Ohanian (1990) |
<table>
<thead>
<tr>
<th>Electronic Word-of-Mouth (eWOM)</th>
<th>followers, who are of marketing value to brands by regularly producing valuable content via social media. eWOM is a form of communication that involves positive or negative statements made by current, former, or prospective customers about a product or company. This communication is disseminated through the Internet and is accessible to a wide range of individuals and organizations.</th>
<th>Influential Persuasive</th>
<th>SMI4. ASTRO uses attractive and interactive influencers with users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Image</td>
<td>Brand image is perceived by consumers in terms of its favorability, strength, and the distinctiveness of the brand associations.</td>
<td>Uniqueness Value Brand Benefits</td>
<td>EWOM1. I want to get opinions from my colleagues on social media sites before using the ASTRO application. EWOM2. The first time I used ASTRO because I saw my friends use it on social media first. EWOM3. I feel more comfortable choosing products when I get opinions from my contacts on social networking sites. EWOM4. I feel more comfortable choosing products when I get opinions from my contacts on social networking sites. EWOM5. When choosing the ASTRO app, opinions from friends on social networking sites are important to me.</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>Purchase intentions are “an individual’s conscious plan to”</td>
<td>Willingness Consideration</td>
<td>PI1. I’m considering buying e-groceries from ASTRO now</td>
</tr>
</tbody>
</table>

make an effort to purchase a brand*. 

Transactional intention

PI2. I will seriously consider buying e-groceries from ASTRO
PI3. I will likely purchase e-groceries in the future from ASTRO
PI4. I purchase e-groceries from ASTRO by friends preferences

Population and Sample

This is an important tool to collect information to answer the research questions. According to Hair et al. (2006), the suggested minimum sample sizes of any research paper need to be conducted with about 100-150 samples to make sure it is constant, and for measuring SEM it is recommended to have 150-400 samples, hence acquiring the furthermore chance of maximum likelihood estimation (MLE) answers. The measured sample collection is written in the following formula:

\[ NSample = (25 \times \text{Number of Independent Variables}) \]
\[ = (25 \times 5) \]
\[ = 125 \text{ Samples} \]

Therefore, this study took 150 respondents. This measurable total sample was taken by the total N sample and added by the recommended number from the experts. The sample was retrieved mainly in Jakarta in order to maintain the respondents that used technology daily. The characteristics of the respondents were defined according to the variables. The researchers employed non-probability sampling, in which not every person of the population had an equal chance of being chosen as part of the sample.

The sample criteria used in this research were male and female over the age of 18 years old, were social media users, had shopped through online grocery applications, were ASTRO (Indonesia’s first quick commerce company that delivers groceries and essentials within 15 minutes) application users, were located around the Jakarta and Tangerang area, and had seen ASTRO’s advertising.

Measuring Variables

The researcher questionnaire variables were measured by the Likert scale model. The respondents were given a scale of answers to fill in from 1 to 5 from strongly disagree to strongly agree. According to Bertram (2007), A Likert scale is a method of determining how much people agree with a statement. It is frequently applied in surveys. It only measures one thing at a time rather than comparing multiple things. In addition, the Likert scale is a technique to measure the level of agreement or disagreement in an ordinal scale toward a certain subject, topic, or event. The respondents were given an ordinal scale of measurement and provided with scales of measurement to answer in the questionnaires that were distributed by the given weight of variables. In addition, the given questions indicated the variable factors that could lead to an increased effect from using the ASTRO (Indonesia’s first quick commerce company that delivers groceries and essentials within 15 minutes) application.

Partial Least Square Method (PLS)

The research data was measured using Smart PLS 4. According to Ringle and Sinkovics (2009) SmartPLS is a useful tool for management science to construct, assess, and validate models. The tool helps explain the cause-and-effect relationships between variables and indicators, which
thus verifies the theoretical hypotheses using empirical evidence, while also incorporating predictive measures. In addition, Smart-PLS is able to utilize multivariate tools to test the model development by correlating the relationship between each latent variable and measured item, which fits with a large sample size and also a small sample size (Hooi & Rahim, 2018).

In a structural equation model, there are two sub-models: the inner model and the outer model. The inner model explains the relationship between the independent and dependent latent variables, while the outer model describes how the latent variables are connected to their observable indicators. The variables in this model are classified as exogenous or endogenous. Exogenous variables have arrows pointing away from them but no paths leading to them, while endogenous variables have at least one path leading to them and represent the effects of other variables.

SmartPLS version 3 is a software tool designed for partial least squares structural equation modeling (PLS-SEM). To effectively analyze data using this software, a structured series of steps should be followed. Initially, data cleansing is imperative to eliminate errors, missing values, and outliers that could impact the results. Following this, the creation of a new project within the software is necessary, preceded by the importation of the cleaned data. Defining the measurement model involves specifying indicators for each construct and assessing their validity and reliability. The relationships between these constructs help establish the structural model. Subsequently, the structural model undergoes evaluation, including the examination of path coefficients, R-squared values, and predictive significance. Bootstrapping is employed to calculate standard errors and confidence intervals for route coefficients. Hypothesis testing determines the statistical significance of path coefficients, and ultimately, the results are reported and conclusions are drawn from the analysis (Hair, 2022).

Validity

In a quantitative study, validity refers to the degree to which a concept is measured accurately. To ensure that a survey instrument accurately captures all the necessary elements and eliminates irrelevant ones related to a specific construct domain, the process of validity evaluation is necessary. This assessment is crucial to determine if the survey instrument effectively measures what it intends to measure (Lewis et al., 1995). The validity of the questionnaire was tested through the Pearson Product Moment Correlation Coefficient, also known as Pearson’s r or simply the Pearson correlation, an analytical measure of the linear relationship between two variables. It is often used to assess the validity of a test or questionnaire, as it can provide information about the degree to which one variable is related to another.

Reliability

The concept of reliability pertains to the degree to which the measurement of a phenomenon yields consistent and steady outcomes, according to Carmines and Zeller (1979). Cronbach’s Alpha is a finding tool that determines the consistency or reliability within a set of examination questions or items. The criteria for determining the reliability of the test, based on Herlina (2019), are as follows:

- If the Cronbach’s Alpha score is less than 0.50, it is considered to have low reliability.
- Cronbach’s Alpha values between 0.51 and 0.70 indicate moderate reliability.
- It is considered reliable if the Cronbach’s Alpha score is between 0.71 and 0.90.
- If the Cronbach’s Alpha score is greater than 0.90, the reliability is considered perfect.

Average Variance Extracted (AVE)

The validation of constructs often involves using various metrics, including the average variance
extracted (AVE). This numerically compares the amount of variation due to a measurement error to the variance captured by a construct. AVE measures the average amount of variation that a latent construct can explain in observable variables that it is theoretically related to. The use of AVE as an indicator in academic literature has been increasing in recent times (Farell, 2010).

The average variance extracted (AVE) in CFA is a concise metric of convergence and is determined as the mean variance extracted for the items loading in a construct.

Standardized loadings can be used to calculate the following value: The number of elements indicated by the I and Li denotes the standardized factor loading. To calculate AVE for n items, multiply the sum of all squared standardized factor loadings (squared multiple correlations) by the item count. In other terms, it is average communality, which is the average squared totally normalized factor loading.

- An AVE of 0.5 or higher is a good indicator of sufficient convergence.
- When the AVE is less than 0.5, there is usually more error in the item than the variance explained by the latent factor structure used to calculate the measure. An AVE measure must be calculated for each latent construct in a measuring model.

### 4. Results and Discussion

#### Respondent Characteristics

The methodology and data collection technique for this research used a quantitative research model. According to Goertzen (2017), a quantitative research method focuses on collecting and analyzing numerical data. The results were analyzed by determining the demographic characteristics of the respondents, the structural model, the constructs of the outer loading or factor loading, the construct composite reliabilities (CRs), the validity (CA), and the AVE. The sample size examined for the data analysis was distributed over N=147 questionnaires located in the city of Jakarta and the provincial areas who were willing to fill it in online, were over 18 years old, and had the knowledge or experience in using smartphones and had the ASTRO app in it. An online questionnaire was distributed through social media platforms such as WhatsApp and Line. In addition, the data was further tested for its validity. The researchers conducted a second questionnaire exceeding over N=30 to substitute poor biased results, improve the data quality, and magnify the dependability of the data. The data was calculated using Smart-PLS 4 and SPSS software to estimate the data results.

#### Table 2. Demographic Characteristics of the Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>64</td>
<td>56.5</td>
</tr>
<tr>
<td>Female</td>
<td>83</td>
<td>43.5</td>
</tr>
<tr>
<td>Age (Year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 - 25</td>
<td>43</td>
<td>29.3</td>
</tr>
<tr>
<td>26 - 35</td>
<td>77</td>
<td>52.4</td>
</tr>
<tr>
<td>36 - 45</td>
<td>23</td>
<td>15.6</td>
</tr>
<tr>
<td>46 - 57</td>
<td>4</td>
<td>2.7</td>
</tr>
<tr>
<td>≥ 58</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Junior high school</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>High school</td>
<td>31</td>
<td>21.1</td>
</tr>
</tbody>
</table>
The demographic characteristics of the respondents were examined using the results in Table 2. Most respondents (n=64) were men between the ages of 26 and 35 (n=77). The respondents mostly had a bachelor’s degree (n=70), worked as a private sector employee (n=49), and had an income ranging between 1 million and 5 million rupiah (n=45). Most of the respondents lived in the West Jakarta area (n=32). Instagram is the most used social media by the respondents (n=128), followed by TikTok (n=60), Twitter (n=42), and Facebook (n=24).

**Validity and Reliability**

A validity and reliability test were conducted on all the questions in the questionnaire. The questionnaire used consisted of 22 questions. The tests were performed on 30 participants. The outcomes that were obtained were processed with the SPSS program.

**Table 3. Correlations**

<table>
<thead>
<tr>
<th>Construct</th>
<th>R-Count</th>
<th>Pearson Correlation</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMA1</td>
<td>0.361</td>
<td>0.804</td>
<td>Valid</td>
</tr>
<tr>
<td>SMA2</td>
<td>0.361</td>
<td>0.711</td>
<td>Valid</td>
</tr>
</tbody>
</table>
In Table 3, all the constructs have Pearson correlation results that exceed the r-count. Therefore, no construct items were deleted. All questions in the questionnaire were valid and could be used as a data collection tool.

Table 4. Reliability Statistics

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.924</td>
<td>22</td>
</tr>
</tbody>
</table>

According to Table 4, the questionnaire has a Cronbach’s Alpha score of 0.94, indicating perfect reliability. Based on the findings of the study, it is possible to conclude that the questionnaire used is reliable (valid) and accurately measures what it is supposed to measure.

The Structural Model

The results were analyzed by Smart PLS (Figure 2). The evaluation of the overall results aimed to examine the relationship between each parameter and its significant levels. The results display the measure of internal reliability, consistency, and validity. Table 4.1 demonstrates that the latent variables from BI and PI have consistent reliability and convergent validity. This is shown by the value of R² by the latent variables. BI has an R² value < 0.186, which explains 18.6% of the variance in BI, which has a significant impact on purchase intention. In addition, purchase intention has an R² value of < 0.526. This explains that PI has 52.6% of variances, which means that both hypothesis path relationships between purchase intention and brand image are numerically significant and have a strong impact on each other. However, the hypothesis path relationship between eWOM, SMI, and SMA is not numerically significant. This can be explained by the path coefficient having a lower value than 0.1.
Table 5. Result Hypothesis Testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Original Sample</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>T statistic</th>
<th>P value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Image &gt; Purchase Intention</td>
<td>0.725</td>
<td>0.723</td>
<td>0.104</td>
<td>3.981</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>EWOM-&gt;Brand Image</td>
<td>0.268</td>
<td>0.282</td>
<td>0.097</td>
<td>6.311</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>Social Media Advertising -&gt; Brand Image</td>
<td>0.249</td>
<td>0.241</td>
<td>0.057</td>
<td>5.409</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>Social Media Influencer-&gt; Brand Image</td>
<td>0.013</td>
<td>0.010</td>
<td>0.065</td>
<td>3.627</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Figure 2. The Structural Model

Note: Some of the indicators have been removed as the following: SMA1, SMI1, SMI3, SMI4, EWOM1, EWOM3, EWOM4, BI1, and PI1 in order to have comparative results that are valid. All the parameters were conducted by N=151, with 147 valid correspondents.

Table 6. Outer Loading/ Factor Loading

<table>
<thead>
<tr>
<th>Variable</th>
<th>Outer Loading</th>
<th>Description</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI2&lt;Brand Image</td>
<td>0.782</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>BI3&lt;Brand Image</td>
<td>0.759</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>BI4&lt;Brand Image</td>
<td>0.712</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>BI5&lt;Brand Image</td>
<td>0.614</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>EWOM2&lt;EWOM</td>
<td>1.000</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>PI2&lt;PURCHASE INTENTION</td>
<td>0.776</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>PI13&lt;PURCHASE INTENTION</td>
<td>0.855</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>P14&lt;PURCHASE INTENTION</td>
<td>0.894</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>SMA2&lt;SOCIAL MEDIA ADVERTISING</td>
<td>0.830</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>SMA3&lt;SOCIAL MEDIA ADVERTISING</td>
<td>0.578</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>SMA4&lt;SOCIAL MEDIA ADVERTISING</td>
<td>0.506</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
<tr>
<td>SM12&lt;SOCIAL MEDIA INFLUENCER</td>
<td>1.000</td>
<td>Valid</td>
<td>&gt;0.50</td>
</tr>
</tbody>
</table>
According to Ghozali (2008), an indicator with a low loading score shows that the indicator is not related to the measurement model. An item with an outer loading less than 0.5 should be eliminated from analysis. According to the data in Table 6, there are some variables that need to be removed in order to clearly measure the correct items and obtain the results needed. As illustrated in the table, the majority of the variables have sufficient and valid outer loadings.

Table 7. Outer Loading/ Factor Loading

<table>
<thead>
<tr>
<th>Variable</th>
<th>Chronbach’s Alpha</th>
<th>Composite Reliability (rho_a)</th>
<th>Composite Reliability (rho_c)</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Image</td>
<td>0.696</td>
<td>0.728</td>
<td>0.810</td>
<td>0.518</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>0.795</td>
<td>0.797</td>
<td>0.880</td>
<td>0.711</td>
</tr>
<tr>
<td>Social Media Advertising</td>
<td>0.435</td>
<td>0.428</td>
<td>0.681</td>
<td>0.427</td>
</tr>
</tbody>
</table>

Based on the statistical analysis and findings it is evidence that our hypothesis concerning the relationship between various variables has a crucial factor for ASTRO e-grocery. It is clear that further implications of these findings and their alignment with our initial hypothesis, in the following section reveal insight on the strategic direction e-grocery can take to enhance marketing position and customer relations.

According to Chin (1998), an AVE loading over 0.70 or higher is considered well-constructed and indicates convergent validity. Based on Avkiran (2017), an AVE score of 0.5 is defined as satisfactory. An AVE score of 0.6 might also be considered valid. Table 6 shows that brand image and purchase intention are the only variables that have an adequate AVE and outer loading. However, even though the SMA measurement did not reach its preferable AVE, the SMA still managed to retain a significant AVE which means it still has a small amount of significance. Low AVE measurements had to be removed. Since eWOM and SMI are not significant, they are not shown in the table.

Based on the research result, ASTRO e-grocery retailers should prioritize building brand image to influence customers to purchase their product and increase customer trust and loyalty, as these factors are essential for maintaining long-term relationships with customers. These managerial implications can help e-grocery retailers improve their social media marketing strategies and increase customer engagement, purchase intention, and brand image. The lifestyle of their target demographic and adjust their marketing techniques accordingly.

5. Conclusion

The results of research on brand image and purchase intention for the eGrocery brand ASTRO show differences with previous hypotheses. In the ASTRO case study, several variables such as social media advertising, social media influencers, and eWOM have a less significant impact, even resulting in a perceived negative impact, thus proving that the only variable that has a significant impact is brand image on purchase intention. For the next strategy and action plan ASTRO e-grocery retailers have to enhance brand image to influence customers to purchase their product and increase customer trust and loyalty, as these factors are essential for maintaining long-term relationships with customers.

The analysis results showed that social media advertising, social media influencers, and eWOM have a less significant impact, even resulting in a negative impact perceived, proving that the only variables that have a significant impact are purchase intention and brand image.

The results of the analysis show a less significant impact, even resulting in a negative
impact perceived between social media advertising, social media influencers, and eWOM, thereby demonstrating that the only variables that have a significant impact are purchase intention and brand image.

This is demonstrated by the value of R² by the latent variables. BI has an R² value greater than <0.186, which means that brand image has a significant impact on purchase intention. Additionally, purchase intention has an R² value of 0.526, implying that both hypothesis path relationships between purchase intention and brand image are significant and have a strong impact on each other. The relationship between social media advertising, social media influencers, and e-word-of-mouth on brand image is not significant towards brand image.

The evaluation of the overall results aimed to examine the relationship between each parameter (social media advertising, social media influencers, e-word-of-mouth, brand image, and purchase intention) and its significant levels based on the final results above being analyzed by SmartPLS. Through the extra questionnaires, we were able to acquire satisfactory results for each convergent validity. According to the findings of this study, companies or organizations, particularly new ones, must be concerned with developing and maintaining a positive brand image, because it has a significant impact on purchase intentions. As a result, the company’s sales and profits will rise.

The researchers suggest that future research should consider other factors or variables that were not considered in this study. And this study was limited to discussing only one e-commerce, so the results may be different when compared to other e-commerce. These results are related to a grocery business, but for other businesses the results may be different. Recommendation for next study are to increase the sample size to make the results more generalizable, future researchers might think about utilizing a bigger sample size, integrating additional variables, such as perceived risk, perceived value, and perceived service quality, which may have an impact on consumer involvement, purchase intent, and brand perception in e-groceries, use other research techniques such as experiments or case studies, to supplement the survey results and offer a more thorough grasp of the research issue, investigate various e-grocery retailers: To determine whether the results apply to various contexts, future researchers should think about looking into various e-grocery retailers, such as pure-play e-grocery retailers and brick-and-mortar stores with an online presence.

Implication

The findings of the study suggest that marketers should focus on developing a positive brand image for their products and services. Marketers are beginning to look for alternatives to using social media advertising, social media influencers, and word-of-mouth to build a brand image especially for the e-groceries business.

For future research, examining the effects of social media influencers' credibility factors, such as their reliability, attractiveness, and knowledge, on consumer behavior, analyzing the impact of perceived risk in influencers' product recommendations on the attitudes and intent of their followers to make purchases, measuring the influence of social media marketing and perceived service quality, which is mediated by e-WOM, on online purchase intention, determining the causes of millennial consumers' behavior in influencer marketing, presenting a meta-analysis of the empirical research on the effects of social media influencers' traits on consumer engagement and purchase intent, analyzing the impact of marketing initiatives by influencers on the sustainability of the fast-fashion sector and the mediating function of purchasing intention. These new areas for research can help us gain a better knowledge of how social media influencers, social media marketing, e-WOM, and lifestyle affect consumer intention to buy and brand perception in the context of online groceries.
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The authors have no conflicts of interest to declare that are relevant to the content of this article.

**Data, Materials and/or Code Availability:**

Data sharing is not applicable to this article as no new data were created or analyzed in this study.