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Article

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MARKETING | RESEARCH ARTICLE

Social influence, financial benefit, and e-wallet multi-brand loyalty: The mediating impact of commitment

Widyoretno Adiani¹, Atik Aprianingsih^{1*}, Ira Fachira¹, Teresia Debby² and Andhiny Puspa Maharatie¹

Abstract: E-wallet services have become a preferred option for digital payments and are expected to continue growing globally over the next few years. A recent trend suggests Millennial consumers use multiple e-wallet services, leading to questions about the concept of loyalty, particularly in the electronic financial services sector. This study aims to investigate whether multi-brand e-wallet users have loyalty and the variables that build loyalty toward the providers they use. The study uses an online survey based on the stimulus-organism-response theory with four independent variables: network externalities, financial benefits, social pressures, and brand advocacy. Purposive sampling was used to collect data from the Millennial Generation through online questionnaires that were distributed through social media and mailing lists, resulting in a sample of 467 respondents. Partial Least Squares Structural Equation Modeling was used to reveal how these variables have positive relationships with users' commitment, which leads to multi-brand loyalty behavior. This study contributes to the literature by enhancing the study of loyalty issues, especially in e-wallet services.

Subjects: Consumer Psychology; Consumer Behaviour; Internet / Digital Marketing / e-Marketing

Keywords: multi-brand loyalty; social influence; commitment; financial benefit; e-wallet

1. Introduction

The popularity of e-wallet services has grown over time, as evidenced by the yearly increase in its use. According to Juniper Research (2022), the number of e-wallet users will be up to 3.4 billion in 2022 and will reach more than 5.2 billion worldwide by 2026. This service has developed into a daily necessity, particularly in developing countries where cashless transactions using e-wallets have begun to replace conventional transactions (Yang et al., 2021). The current advanced technology creates a simple yet beneficial function, making it easier for consumers to adopt and use this service and thereby contributing to its growth (Wei et al., 2021). Despite the service's simplicity and given the existence of promotion wars and homogeneity in features, customers are able to try alternative providers quickly (Valent, 2019; Vana et al., 2018).

Most e-wallet users are from the Millennial Generation, who like to try new things and have a lower level of loyalty, driving the debate regarding long-term relationships and continuity of use

in this service (IPSOS, 2020; Vilkaite-Vaitone & Skackauskiene, 2020). Millennials are the second-largest generation in the world, after Gen Z, with a population of 440 million in China alone, according to *Fortune* (Lau, 2022). In India, the *Economic Times* reports that Millennials make up 34% of the population and are projected to reach 50% by 2030, and in Indonesia, Millennials accounted for 25.7% (69.38 million) of the population in 2020 (Indonesian Statistics Bureau) (Sengupta, 2023). The size and growing influence of the Millennial Generation requires that e-wallet providers understand their lack of loyalty to e-wallets, particularly in Indonesia.

In the case of the e-wallet itself, studies discuss the single-loyalty issue from various perspectives (Amoroso & Ackaradejruangsri, 2018; Yuan et al., 2021). Although these studies identify the emergence of single loyalty in e-wallets and the reasons for this, they do not consider the current multi-brand conditions; this is confirmed by a survey of Indonesian e-wallet users who frequently use multiple e-wallet services (Snapchart, 2021). In existing single-loyalty discussions, multi-brand usage is not captured in the definition of loyalty (Doherty & Nelson, 2008). Nonetheless, given the abundance of providers and marketing strategies, sticking with just one service seems more challenging than using multiple services.

The use of multiple brands may be reasonable but often leads to societal misperceptions since multi-brand users are assumed to be switchers with no loyalty toward the brands they use (Arifine et al., 2019). However, several multi-brand studies find that this behavior also builds multi-brand loyalty (MBL) toward the brands they used (e.g., Felix, 2014; Olson & Jacoby, 1974; Uncles et al., 2010). MBL behavior has emerged in some sectors, such as fast-moving consumer goods (FMCG), mobile phone service, and tourism. However, these sectors differ from financial services, and the customer behavior and goals while using the product or service will also differ (Almeida-Santana & Moreno-Gil, 2017; Arifine et al., 2019; Felix, 2014). This makes multi-brand usage in financial services, such as e-wallets, a unique issue—financial products are generally utilitarian products that carry more potential risk than others, and customers exhibit a higher level of loyalty and a lower level of switching (Collinson, 2013; Miah et al., 2020). There is a lack of discussion on this topic, and e-wallet multi-brand users should not simply be classified as switchers with no loyalty or MBLs, and, in particular, they cannot be compared to single-loyalty users.

We hope to bridge the gap in knowledge by exploring MBL in e-wallet services through an adaption of the lens of stimulus-organism-response (S-O-R) theory. This theory has already been used by existing studies to explain how external stimuli can indirectly impact behavioral responses (Kumar et al., 2021). It is also aligned with the reason that is currently often given for e-wallet usage—most of those who use these services do so as a result of the considerable encouragement in the form of brand promotion and social influence (Teng & Khong, 2021).

In this study, we identify two external factors that act as the main stimuli encouraging e-wallet usage. The first stimulus is from the service of e-wallet providers and represents network externalities and financial benefits (Qasim & Abu-Shanab, 2016; Teng & Khong, 2021). People use an e-wallet for its practicality. Thus, it is more likely that people will use an e-wallet that is widely accepted as a method of payment. It is at this point that network externalities come into play since these indicate that the utility a user obtains from using a certain product increases with the number of people using that product (Katz et al., 1985). The second stimulus is social influence, which represents social pressure and brand advocacy by other users (Windasari et al., 2022). Social influence can be understood as how people's thoughts, feelings, and behaviors respond to their social world, including the tendency to conform their behavior to those of others, follow social rules, and obey authority figures (Purani et al., 2019; Zhou, 2016).

This study employs user commitment as the most significant internal consumer state. It repeatedly appears in those with the highest loyalty level and is the connection between the stimuli and MBL as the final response (Han et al., 2011; Şahin et al., 2013). Oliver (1999) defines commitment as the desire to maintain a relationship with the preferred brand while using

a product or service. Commitment is solely about the relationship between humans and companies and customers' brands (Davis-Sramek et al., 2009; Oliver, 1999). In this study, we focus on those who actively utilize multiple e-wallet brands among Indonesian Millennials, the generation that represents a significant portion of users (Adisty, 2022). Based on the context discussed above and the research gap identified, this study poses several questions:

- (1) Does MBL appear in Millennial multi-brand users?
- (2) Between network externalities, social pressure, financial benefit, and brand advocacy from other users, what factors most strongly influence MBL?

The findings of this study are expected to improve and deepen the study of loyalty, especially in the e-wallet services sector. Additionally, the findings contribute to e-wallet service providers' understanding of their customers and their ability to devise an optimal strategy to survive in the competitive market.

2. Research model and theoretical background

2.1. Theoretical background

2.1.1. Multi-brand loyalty and switcher

Existing studies on brand loyalty describe how loyalty behaviors are expressed behaviorally by repeat purchases and willingness to commit to a specific brand (Dapena et al., 2020). However, the present abundance of products on the market seems to encourage customers to try and use several brands rather than stick with a particular brand, as is the case in existing single-loyalty studies (e.g., Cachero-Martínez and Vázquez-Casielles (2021); Wilk et al. (2021)).

Brand loyalty measures include brand-related and individual characteristics since both may induce differences in loyalty (Mellens et al., 1996). When discussing loyalty, it can thus be assumed that a singular relationship exists between individual customers and a specific brand. Loyalty is defined in the study by Jacoby and Kyner (1973) as the preference behavior toward one or more alternatives out of a broader field containing competing alternatives, highlighting how loyal behavior is not bound to one brand but can occur across several brands. Mellens et al. (1996) emphasize the importance of specifying the brand loyalty measure employed. Since this study aims to measure individual loyalty to multiple brands, we use multi-brand loyalty instead of a single loyalty to a whole product and service.

Today, using many brands seems fairly common, and those who engage in multi-brand usage behavior are often immediately considered as switchers. Some studies find that multi-brand users can develop MBL toward the brands they use (Arifine et al., 2019; Felix, 2014; Olson & Jacoby, 1974). These studies also emphasize how loyalty, MBL, and switchers in products and services are entirely different.

Regarding goods, Quoquab et al. (2014) emphasize that when customers use Brand A and then move to Brand B but return to Brand A, they are still categorized as loyal customers. Hence, the purchase share is usually understood as loyalty in terms of goods. A different understanding appears when a customer divides their purchase. For example, from eight purchases, a customer may alternately buy one product category from each of Brands A and B. This customer will be categorized as having divided loyalty (Cheng et al., 2021; El Banna et al., 2018).

In terms of services, the purchase share is usually referred to as multi-brand loyalty. Gentry and Kalliny (2008) refer to MLB as a particular case of polygamy, where the consumer equally desires the given alternatives. Although multi-brand-loyal customers use different brands in one product category, they have a preferred brand that they will buy sustainably (Arifine et al., 2019; Oliver,

1999). The consistent repurchase of certain brands from among the set of brands indicates a commitment toward the brands they use (Zhang et al., 2017).

Generally, a switcher is understood as a consumer who switches from one product they use to another. Service switching occurs when a customer drops the service of their existing provider once and replaces it with another, even though they still use that service category (Quoquab et al., 2014). A switcher thus represents the lowest level of loyalty in the loyalty spectrum and is marked as a disloyal customer. Dioko et al. (2013) explain how this behavior can appear due to low switching costs, social influence, and the alternative products or brands seeming more appealing and providing additional benefits.

Price orientation is often the main factor that encourages a switching behavior. Some studies, such as those by Knox (1998) and Mithas et al. (2013), consistently state that price is an excellent strategy to attract customers and even a sustainable business strategy to survive competition. However, competition based on price incentives provides little reason for potentially loyal customers to develop an affinity and alternative routines since they may be attracted by competitor's most recent price incentives.

Indeed, existing studies always categorize a switcher as someone who uses a particular product to achieve a specific benefit (Doherty & Nelson, 2008; Liang et al., 2013). However, it should be confirmed that every customer—either a switcher, multi-brand loyal, or single-brand loyal—wants to fulfill their needs when using a product (Quoquab et al., 2014; Zhou, 2016). Regarding receiving a benefit, Knox (1998) finds that the main difference occurs when switchers use a product opportunistically and have neither affinity nor value presence. Contrarily, multi-brand loyal customers are more motivated to consume certain goods or services, preventing them from switching quickly from the goods they frequently use to others. Eventually, despite these services' similar benefits and products, the multi-brand loyal users will continue to demonstrate loyalty to particular brands or services while disregarding others within the industry that offer similar services (Quoquab et al., 2014).

Existing research on MBL examines MBL behavior and how this behavior develops into the final behavior when influenced by internal and external variables. Felix (2014) and Arifine et al. (2019) identify internal factors in the form of internal customer state, such as perceived freedom, public self-consciousness, or need for privacy. Other studies on MBL find that external factors impact MBL behavior repetitively in the form of social influence or the brand itself (Almeida-Santana & Moreno-Gil, 2018; Arifine et al., 2019; Dawes, 2014). Although research on MBL has developed, the various conclusions from these studies imply that this behavior cannot be described in general terms. The factors that influence this behavior differ among sectors, and the influence of a particular factor may differ between industries.

For example, in the FMCG sector, market competition and a well-known brand are often driving factors. In contrast, MBL studies on services (e.g., Almeida-Santana & Moreno-Gil, 2017, 2018; Quoquab et al., 2014) show that the driving factors of MBL in each service are quite different. The differences occur due to the motivation and core of each service function. Notably, this issue could be researched further to understand MBL in other service industries.

2.1.2. S-O-R theory

The S-O-R theory of Mehrabian and Russell (1974) is usually employed to explain consumer behavior in terms of the customer's environmental psychology (Kumar et al., 2021). In this theory, stimulus (S) are environmental factors that influence the internal state of the consumer, usually known as an organism (O), who then has a behavioral response (R). This theory has been widely used in the marketing literature (Anisimova et al., 2019; Kumar et al., 2021) to understand consumers' final responses, such as repurchase intention and loyalty. Recent studies explain how this theory can elucidate how the final response, initiated by external stimuli, will evoke the

consumer's internal state. For a range of reasons, the S-O-R theory appears appropriate for understanding MBL, especially in e-wallet usage.

First, studies of single loyalty in financial services and MBL highlight how this final response is encouraged by external factors. In the discussion of loyalty in banking, the quality of service—either from the banking staff in person or the servicescape offered by providers—has an impact on user loyalty (Loureiro & Sarmento, 2018; Sahoo & Pillai, 2017). Other loyalty studies also identify how different types of social influence act as an effective stimulus for building user loyalty (Shahid et al., 2022). Some studies of MBL also highlight how the service from brands (e.g., product quality, promotion) and social influence (e.g., family influence, peers' pressure) impact MBL behavior even though they concern other industries (Arifine et al., 2019; Dawes, 2014; Felix, 2014; Quoquab et al., 2014).

Second, although the studies have different objectives (single loyalty in financial services and MBL), both highlight how service providers and social influence indirectly influence the final response. Furthermore, both findings also emphasize how external stimuli cannot directly impact the final behavior of consumers without affecting the user's cognition and emotion (Shahid et al., 2022). Based on these, the use of S-O-R theory in this study allows a complete discussion of MBL in e-wallets.

2.2. Hypothesis development

2.2.1. Network externalities and user commitment

Some studies find that, beyond simply facilitating the digital payment process, external factors, such as network externalities in digital services, increase user intention, willingness to use, and loyalty (Au & Kauffman, 2008; Cen & Li, 2020; Van Veldhoven & Vanthienen, 2021). Haruvy and Prasad (1998) explain how, in general, network externalities occur when a product's profits align with the increasing number of users using the product. For e-wallets, involved users are divided into those who directly use the service for their transactions and those who use it because of a merchant or e-commerce entity that collaborates with certain e-wallet services. These two users have a reciprocally beneficial relationship, indicating that when more merchants use particular e-wallet services, they can attract personal users to that service and vice versa (Andreassen et al., 2018; Cen & Li, 2020). Network externalities from merchants and e-wallet users serve as stimuli that evoke individual customers or the organism. Like any other digital service, customers expect e-wallets to meet their needs in the current situation (Leimeister et al., 2014). When the value of the network increases, the individual customer tends to commit to continuously using the service because they need to do so (Randall & O'driscoll, 1997). Thus, the broader network externalities impact user commitment to continue using services as long as this service can fulfill their needs and offer the value they want to achieve. Therefore, the following hypothesis is proposed:

H1a A higher level of network externalities has a positive relationship with user commitment.

2.2.2. Financial benefit and user commitment

In addition to network externalities, a financial benefit often becomes an essential factor that triggers a user to continue using a particular service (Vana et al., 2018). According to Windasari et al. (2022), short-term incentives (such as direct discounts, cashback, and free administrative fees) appeal to younger consumers who favor monetary incentives.

The primary reason customers commit to a particular product or service is based on rational and emotional thought, which might differ depending on the reason for using products or services. In the e-wallet industry, customers mainly use the product to meet their financial needs (Amoroso & Ackaradejruangsri, 2018; Tun, 2020). Thus, rational thought is the main driver in developing commitment in this industry. However, emotion also plays a substantial role in

a customer's use of financial services. Eloksari (2020) notes that although many emerging e-wallet services appear and provide cashback, previous e-wallet services with less promotion still have organic users.

Ultimately, the appearance of a financial benefit can impact user commitment, as demonstrated by existing studies (Davis-Sramek et al., 2009; Randall & O'driscoll, 1997) that highlight how commitment is not limited to an emotional relationship but can take the form of calculable benefits. Therefore, the following hypothesis is proposed:

H1b Financial benefit has a positive relationship with user commitment.

2.2.3. *Social pressure and user commitment*

Social influence is repeatedly the common factor that can persuade others to engage in different behaviors, from user intention to loyalty (Gong et al., 2020; Singh & Srivastava, 2020). Even though some studies emphasized how the form of social factors will appear differently depending on the product, the appearance of social influence effectively encourages people to try new products and services by elevating the new users' beliefs and decreasing risk concerns (Kirmani & Rosellina, 2017; Yang et al., 2021). When it comes to financial services, which are classified as utilitarian needs with high switching costs compared to other sectors (Miah et al., 2020), rational decision-making is used by users to filter out the advantages and losses. Notably, the influence that encourages them is not as simple as word-of-mouth (WOM) recommendations from their peers.

Pam (2013) describes how another level of social influence (social pressure) acts through persuasion, rational argument, conformity, and demand to follow to effectively impact other rational decision-making processes and convince an individual to try a service (Wu et al., 2014). Social influence is significant for users to be averse to risk associated with a particular product (Sikarwar, 2019). Evidently, in the context of e-wallet services, social pressure can indirectly be formed when peers or their relatives use certain e-wallet services and make their peers use the service previously they did not use. This kind of subliminal social pressure has the power to conform to people. According to Fullerton (2005), affective commitment is the essential variable in fostering the development of relationships because it has been linked to switching intents to other service providers. Due to emotional feelings, such as conformity to fit in with their society or loyalty to their workplace, the commitment form is not mainly regarding profit or loss reflected by calculative commitment but based on the emotion of belongings. As a result, people feel more connected and included in the group, leading to a more substantial commitment to the services they utilize (Myers, 2010; Sahelices-Pinto et al., 2021). Therefore, the following hypothesis was formulated:

H1c Social Pressure has a positive relationship with user commitment.

2.2.4. *Brand advocacy from other users and user commitment*

An advocate is a customer who actively recommends the brand to others; advocates take the second highest position on Raphael's and Raphael (1996) loyalty ladder (Bhati & Verma, 2020). As a level up from a typical repeat buyer with high brand involvement, advocates are categorized as different customer types because of the promotion of other non-consumer brands (Schepers & Nijssen, 2018; Wilk et al., 2021). Bhati and Verma (2020) find that advocates feel comfortable sharing because they believe that, like them, others will benefit from the brand they promote. The advocate's depth of knowledge and positive experiences with the brand become the main reason that their influence is more effective than a simple positive WOM recommendation from other consumers (Cheung et al., 2020); advocates have an extensive understanding of the brand that makes them seem reliable and trustworthy (Kumar & Kaushik, 2020).

The presence of advocates makes people interested in the product, especially in the context of the use of e-wallets by Millennials, who have lower trust in advertising and cannot easily be influenced by social influence, especially concerning money (Purani et al., 2019). Moreover, because their usage is not based on pressure from the advocates and users already calculating the benefits, the commitment toward an e-wallet product that they develop is initially based on advocacy from other users in the form of calculative commitment.

However, prior studies (Bhati & Verma, 2020; Turri et al., 2013) find that an advocate can also pass their emotional feeling toward the brand on to others. In close circles, affective commitment becomes contagious (Heinzen & Goodfriend, 2021; Myers, 2010). According to previous studies, compared to marketing, a brand advocate may boost the use of e-wallets by showcasing the product and features and encouraging other users' trust in the service (Purani et al., 2019). Because their usage is not based on any pressure from advocates and users already calculating the benefits they get, the commitment toward the e-wallet product grows (Yanamandram & White, 2010). Therefore, the following hypothesis is proposed:

H1d Brand advocacy from other users has a positive relationship with user commitment.

2.2.5. User commitment and multi-brand loyalty

Dapena et al. (2020) highlight how commitment can be established emotionally or rationally. Commitment that builds emotionally, often called affective commitment, emerges based on the emotional relationship between the customer and the brand or with other related factors, such as social reasons (Han et al., 2011). Other common commitments frequently rely on calculative or rational thinking since the user of this service can choose whether to utilize the service or not based on its benefits and drawbacks (Davis-Sramek et al., 2009).

In this study, affective commitment stems from the need to be accepted and emerges as a result of social pressure and brand advocacy. Calculative commitment arises from network externalities and perceived benefits. Customers who feel that using multiple brands makes them socially accepted and provides them with benefits will likely exhibit loyalty to those multiple brands by continuously using and showing preference toward them over others (Arifine et al., 2019). Therefore, the following hypothesis is proposed:

H2 User Commitment has a positive relationship with MLB.

3. Research method

3.1. Data analysis and results

The participants of this study are Indonesian Millennial users of e-wallets. International Data Corporation (2022) forecasts that by 2025, Indonesia will constitute half of the new users of e-wallets in Southeast Asia due to the high annual rates of use of e-wallets. Hence, the involvement of Indonesian e-wallet users allows the e-wallet service users to be studied in terms of the number of users, behavior, and habits. The data were collected through an online survey distributed via social media and a public university mailing list from August to September 2021. Those invited to participate in the survey were those who are members of the Millennial Generation, who used several e-wallet services for their personal needs rather than necessities, such as business.

This study seeks to understand the behavior of Indonesian Millennials who use multiple e-wallet brands. The study participants were relatively diverse, as are Indonesian Millennials (IPSOS, 2020). Since only one generation is involved in the study, there is no need for a control variable to exclude the influence of other potential generational factors on the dependent variable (Atinc et al., 2012).

The minimum respondent number is determined using Slovin's theory—the minimum number of respondents is 399 after counting the e-wallet users population in Indonesia and estimating the error at 5% (Sugiyono, 2018). The final questionnaire was contributed by 467 Indonesian Millennials, which exceeded the threshold. After the data collection process, the data are analyzed using partial least squares-structural equation modeling (SEM).

This study reduces the potential for common method bias by implementing certain procedural approaches. One such approach involves enhancing the clarity of scale items, including by using an even scale, to ensure the clarity of respondents' responses and that the questions are easily comprehensible (Jordan & Troth, 2020).

3.2. Participant profiles

In order to ensure a smooth and organized data collection process, the survey was conducted in two stages. The first stage comprised inquiries about participant's demographic and personal details to gain insights into their background. This was followed by a set of questions concerning their e-wallet use habits. These questions served a dual purpose: to understand their behavior with multiple e-wallet brands and to screen for respondents who were indeed users of multiple e-wallet brands. The outcomes of the first stage of the survey are presented in Tables 1 and 2.

The questions asked during the second stage of data collection were designed to explore customers' responses to the statements presented. These responses were evaluated using a six-point Likert scale. The questions and the outcomes of this stage are presented in Table 3.

The respondent categorization was based on the Indonesian context, where the respondent's domicile may impact their e-wallet access and level of network externalities. The monthly income categorization of respondents includes the upper and lower income in relation to the average Indonesian monthly income of \$190 (Central Bureau of Statistics Indonesia, 2021).

The survey shows the majority of respondents are middle-class, the population group that, particularly in emerging market economies, is the primary source of population-based economic growth and their expenses (Canals, 2019). Additionally, this study demonstrates how multi-brand e-wallet customers did not immediately examine all accessible brands for their needs despite having regular access to multi-brand services. According to the survey responses, most respondents utilize two to three e-wallet services, depending on the brands they use, rather than selecting and considering all available options. Multi-brand users that limit their e-wallet choices emphasize that even though the level of switching is higher than for conventional banks, due to its convenience and ease of switching, the e-wallet service is still categorized as a service that has switching costs (Qayyum et al., 2013).

In contrast, in the question related to e-wallet brand replacement, 37.5% of respondents had never switched to other e-wallet services, as presented in Table 2. By contrast, in the second-most popular response, 27.4% of respondents had already replaced their e-wallet three or more times. This finding is interesting and reveals how the behavior of most multi-brand users tends to limit the number of e-wallet services they use for daily needs through two actions: staying loyal to the e-wallet brand or leaving the brand and switching to other brands that seem more exciting.

3.3. Assessment of validity and reliability

In the second stage of the survey, respondents were asked more specific behavior questions, and responses were measured using a Likert scale; each construct must be tested for reliability and validity. This study uses outer loading and composite reliability to test reliability. Convergent validity is assessed by calculating the average variance extracted (AVE) and divergent validity through the Fornell-Larcker Criterion. The minimum recommended AVE value is 0.50. For the Fornell-Larcker Criterion, the root of AVE for a particular construct is greater than its correlation with all other constructs (Hair et al., 2014; Henseler et al., 2015). In respect of testing reliability,

Table 1. Demographic and personal information of respondents

Variable	Item	Frequency	Percentage
Gender	Male	179	38.3%
	Female	288	61.7%
Domicile	West Java	147	31.5%
	Central Java	18	3.9%
	East Java	95	20.3%
	Jabodetabek	132	28.3%
	Banten	13	2.8%
	Special region of Yogyakarta	16	3.4%
	West Sumatera	5	1.1%
	South Sumatera	12	2.6%
	Riau	6	1.3%
	Others	23	4.8%
Educational Level	Senior high school	35	7.5%
	Associate degree	28	6.0%
	Bachelor	314	67.2%
	Master/Doctorate	90	19.3%
Job	Academic/Researcher	16	3.4%
	Student	81	17.3%
	Civil Servant/Working in the government sphere	58	12.4%
	Private employee	182	39.0%
	Health worker	23	4.9%
	Entrepreneur/Freelancer	71	15.2%
	Housewife	26	5.6%
	Fresh graduate/Job search process	8	1.7%
	Not Working	2	0.4%
Monthly Gross Income in USD	Under \$69.68	37	7.9%
	\$69.68–\$278.73	131	28.1%
	\$278.74–\$487.77	130	27.8%
	\$487.78–\$696.82	90	19.3%
	Above \$696.82	79	16.9%

prior studies (e.g., Hair et al., 2014; Nunnally & Bernstein, 1994; Ursachi et al., 2015) highlight that Cronbach's alpha should be above 0.6, while the composite reliability value should be above 0.7.

Table 3 illustrates the mean and standard deviations of the variables used. The variables have moderate to high mean values. The variable with the highest mean of 5.677 is NE5 ("Many online and offline stores offer payments using an e-wallet"), while that with the lowest mean of 3.032 is MBL5 ("I will not switch to using another e-wallet service if the e-wallet that I am using now is no longer profitable for me"). The results reveal that respondents tend to be affected by network externalities and social pressure. Interestingly, the mean for the MBL goods is often lower than that for other factors, including financial benefits and brand advocacy by other users.

We employ SEM using SmartPLS Version 3.2.9. Initial outer loading results for BA3 (0.625), FB3 (0.643), NE1 (0.659), NE2 (0.686), C6 (0.571), MBL4 (0.587), MBL5 (0.376), and MBL6 (0.532) are less

Table 2. Respondent behavior toward multi-brand e-wallet ownership

Usage habits toward ownership of multi-brand e-wallet services			Total	Percentage
E-wallet brand replacement	How many times have you switched from an e-wallet provider in the past three years?	Never	175	37.5%
		One time	86	18.4%
		Twice	78	16.7%
		Three or more times	128	27.4%
Number of e-wallet services used	How many different e-wallets have you used in the past three years?	Two services	94	20.1%
		Three services	197	42.2%
		Four or more services	176	37.7%
User consideration	How many e-wallets do you consider when switching to a new e-wallet?	I just considered using two to three different e-wallet brands that offer the same product as I am currently using	410	87.8%
		I take all e-wallets into consideration	57	12.2%
User preferences	Do you have any preferences for specific e-wallet providers?	I tend to choose certain e-wallet services (only two to three services)	336	71.9%
		I do not have a specific preference for the e-wallet brand that I like	131	28.1%

than 0.7. Based on Henseler et al. (2015), outer loadings should be above 0.70 for a well-fitting reflective model. An indicator with an outer loading between 0.40 to 0.70 range should be dropped if it improves composite reliability (Hair et al., 2014). Therefore, BA3, FB3, NE1, NE2, C6, MBL4, MBL5, and MBL6 are omitted from the second run (Table 3). The results from the second run show that all outer loading values are higher than 0.70, with composite reliability ranging from 0.822 (social pressure) to 0.944 (MBL). The values of the AVE range from 0.607 (social pressure) to 0.850 (multi-brand loyalty). The reliability of the measurement model is thus supported (Table 3). As shown in Table 3, all the variables are reliable.

Table 4 summarizes the acceptance requirements for the reported values of the Fornell-Larcker Criterion, which stipulates that the square root value of AVE must be greater than the correlation value of the construct and all other constructs. Based on the AVE and Fornell-Larcker Criterion results, all variables are valid.

3.4. Inner model evaluation

The hypotheses are tested by assessing the P-value. The hypothesis can be declared supported if the P-value is below 0.05 (Hair et al., 2014). Hypotheses 1, 2, 3, 4, and 5 are supported, as shown in Table 5. Social pressure positively affects commitment ($\beta = 0.297$, $t = 5.861$, $p = 0.000$). The relationship between brand advocacy from other users and commitment is also significant and positive ($\beta = 0.154$, $t = 3.295$, $p = 0.001$). Commitment is significantly and positively affected by network externalities ($\beta = 0.301$, $t = 7.224$, $p = 0.000$), financial benefit ($\beta = 0.302$, $t = 6.790$, $p = 0.000$) and MBL ($\beta = 0.491$, $t = 11.561$, $p = 0.000$).

Table 3. Constructs, items, descriptive statistics, and measurement model results

Constructs and items	Means	SD	OL
Brand advocacy from other users (CR = 0.894 AVE = 0.809)			
BA1. Friends who constantly talk about good things about certain e-wallet services make me interested in using these e-wallet services	4.987	1.219	0.934
BA2. The family who always talks about good things about certain e-wallet services makes me interested in using the e-wallet service	4.460	1.444	0.863
BA3. Promotions from e-wallet service agents who have a deep understanding of the products offered make me interested in using the e-wallet service ^a	4.225	1.415	-
Social pressure (CR = 0.822 AVE = 0.607)			
SP1. I agree to use an e-wallet as long as it serves my purpose	5.619	0.625	0.742
SP2. In my environment (education or work), using certain e-wallet brands is encouraged	4.719	1.447	0.735
SP3. In my family or peers' environment, it is common to use certain e-wallet brands	5.261	1.014	0.855
Financial benefit (CR = 0.828 AVE = 0.706)			
FB1. Switching to other payment methods besides e-wallets means I will lose some financial benefits granted by e-wallets, such as cashback and discount	5.169	1.089	0.808
FB2. E-wallet applications enable me to shop economically	5.092	1.188	0.871
FB3. By using an e-wallet, I become more economized and spend less money ^a	3.818	1.492	-
Network externalities (CR = 0.860 AVE = 0.672)			
NE1. Using an e-wallet is one of the best ways to make a payment ^a	5.439	0.824	-
NE2. The e-wallet application that I use runs well and rarely has problems ^a	5.373	0.847	-
NE3. The e-wallet service provides useful features such as fund transfer	5.602	0.686	0.788
NE4. There are useful features such as payments at merchants	5.642	0.616	0.870
NE5. Many online and offline stores offer payments using an e-wallet	5.677	0.621	0.799
Commitment (CR = 0.913 AVE = 0.636)			
C1. I enjoy being an e-wallet client	5.612	0.662	0.801
C2. The e-wallet services I use always take care of their customers in the best way	5.347	0.820	0.854
C3. I have a reciprocal relationship with the e-wallet	5.111	1.072	0.798
C4. I have confidence in the e-wallet service that I use	5.259	0.870	0.754
C5. It pays off economically to be a customer of an e-wallet	5.248	1.004	0.768

(Continued)

Table 3. (Continued)

Constructs and items	Means	SD	OL
C6. I would suffer economically if the relationship were broken ^a	4.178	1.333	-
C7. The e-wallet has advantages over others	5.278	0.909	0.806
Multi-brand loyalty (CR = 0.944 AVE = 0.850)			
MBL1. Among the different e-wallets, there is one that I like better than the others	5.000	1.196	0.915
MBL2. Among the different e-wallets I use, I have one that I prefer over the others	5.128	1.182	0.951
MBL3. I use different e-wallets at times, but I always go back to my favorite e-wallet	5.021	1.267	0.898
MBL4. I will not leave the e-wallet service that I currently use, even though there are new e-wallet services that are more profitable ^a	3.919	1.449	-
MBL5. I will not switch to using another e-wallet service if the e-wallet that I am using now is no longer profitable for me ^a	3.032	1.549	-
MBL6. I will not switch to using another e-wallet if the e-wallet that I am using now does not provide interesting features ^a	3.473	1.515	-

Note (s): ^a item deleted in the validation process. CR: composite reliability; AVE: average variance extracted; SD: standard deviation; OL: outer loading.

Table 5 shows the direct effect of the variables on the dependent variable, and Table 6 shows the indirect effects of external stimuli on MBL behavior.

Stone—Geisser Q^2 is employed for a more thorough evaluation of the constructs; this measure represents a synthesis of cross-validation and functioning. For the constructs to be predictively relevant, the Stone—Geisser Q^2 must have a value greater than zero (Ghozali & Latan, 2015). The R^2 , which indicates the independent variable's influence on the dependent variable, is also calculated. Following Chin (1998), the different values of R^2 provide a different interpretation; if the R^2 value is 0.19 then it can interpret as weak, 0.33 as moderate, and 0.67 as substantial. Table 7 presents how the R^2 coefficient is substantial for commitment and weak for MLB. The Stone—Geisser Q^2 result passes the threshold, indicating that the model used has predictive relevance.

4. Discussion

This study extends the literature on consumer loyalty in e-wallet services from the perspective of multi-brand customers, an issue that is becoming increasingly relevant. Using the S-O-R theory, this study analyzes four different stimuli representing the common variables affecting e-wallet users: consumer brand advocacy, network externalities, financial benefit, and social pressure. The data analysis reveals that all of the stimuli are positively correlated with user commitment and indirectly with MBL behavior, supporting earlier studies (Eisenbeiss et al., 2015; Kumar et al., 2018; Wilk et al., 2021) and field surveys (Dharmasaputra, 2020; DigitalBisa, 2021).

However, compared to other stimuli, commitment, financial benefit, and network externalities are the leading factors, indicating e-wallet users tend to build a commitment based on rational rather than emotional decisions. This finding supports previous studies in financial services, which

Table 4. Discriminant validity testing

	Brand advocacy from other users	Commitment	Financial benefit	Multi-brand loyalty	Network externalities	Social pressure
Brand advocacy from other users	0.899					
Commitment	0.623	0.798				
Financial benefit	0.572	0.658	0.840			
Multi-brand loyalty	0.437	0.491	0.308	0.922		
Network externalities	0.374	0.652	0.397	0.423	0.820	
Social pressure	0.618	0.719	0.501	0.516	0.583	0.779

Table 5. Results of the structural model assessment

Hypothesis	β values	T statistics	P values	Hypothesis
H1: Social pressure -> commitment	0.297	5.861	0.000	Supported
H2: Brand advocacy from other users-> commitment	0.154	3.295	0.001	Supported
H3: Network externalities -> commitment	0.301	7.224	0.000	Supported
H4: Financial benefit -> commitment	0.302	6.790	0.000	Supported
H5: Commitment -> multi-brand loyalty	0.491	11.561	0.000	Supported

Table 6. Total effect

	Commitment	Multi-brand loyalty
Brand advocacy from other users	0.154	0.075
Financial benefit	0.302	0.148
Network externalities	0.301	0.148
Social pressure	0.297	0.146
Commitment		0.491

highlight how financial services are generally used for utilitarian purposes and how the decision-making process will take into account all of the users' basic needs rather than serving as a mode of self-expression for users (Jamshidi et al., 2018; Lu et al., 2016). A similar result appears in the indirect relationship between external stimuli and MBL, where financial benefit and network externalities ultimately have the most significant impact. These findings emphasize that although social influence positively impacts MBL and commitment building, the core service function influences the buyer's decision-making process more than emotional factors (Samudro et al., 2021).

However, despite having a positive relationship with user commitment and being explained by social pressure and other users' brand advocacy, social influence did not have the same significant impact on commitment and MBL as network externalities and financial benefits. However, compared to brand advocacy by other users, the social influence factor, social pressure, has a higher impact value, emphasizing the consideration of benefits and loss and rational decision-making in

Table 7. R^2 and Q^2

	R^2	Q^2
Commitment	0.704	0.438
Multi-brand loyalty	0.241	0.197

the process of initial and continued multi-brand e-wallet use (Amoroso & Ackaradejruangsri, 2018; Tamara et al., 2020).

Additionally, although e-wallet services offer a simple, cashless way for users to switch between services more quickly than conventional banking, they still have a switching cost, as reflected in consumers' preferences and tendencies to select a particular brand over the many others in the market (Miah et al., 2020). In conclusion, this study demonstrates that, although multi-brand usage in e-wallet services has become a phenomenon that brings into question the continuance of use and even loyalty, brand loyalty among multi-brand consumers remains in the form of MBL.

Studies on single-loyalty behavior find that commitment becomes the basis for consumers remaining with the brand (Koo et al., 2020). This study confirms that commitment toward the brands appears even in MBL behavior, although the antecedent will be different and depend on the core function of the service itself. The consistency in the use of particular services and the level of user commitment emerge as the critical distinctions between MBL and switcher behavior. This finding reduces the prejudice that said multi-brand users immediately categorize as switchers by confirming earlier results regarding MBL behavior (Arifine et al., 2019; Felix, 2014; Uncles et al., 2010).

4.1. Theoretical and managerial implications

4.1.1. Theoretical implications

The current rapid growth of e-wallets has provoked numerous discussions about the issue from distinct viewpoints (e.g., Ali et al., 2022; Teng & Khong, 2021). In particular, the literature on e-wallet services has developed rapidly, ranging from user intentions to broader networks that influence intense competition between e-wallet services. However, the discussion about loyalty in e-wallets is often focused on the single-loyalty issue, whereas the tendency to use multi-brands in this service has risen recently. Brand commitment is essential for cultivating brand loyalty (Khan et al., 2020), which cannot be developed without brand commitment, and highlights the importance of fostering commitment to multiple brands to achieve MBL.

This study connects multi-brand usage and MBL in e-wallet users, a topic that has not yet been thoroughly discussed. From the initial study of Olson and Jacoby (1974) to present studies of MBL (such as Almeida-Santana and Moreno-Gil (2018), Arifine et al. (2019)), each has produced results emphasizing that the reasons for MBL's encouragement will vary based on the industries covered. This study also finds that financial benefits and network externalities have a greater effect on commitment than brand advocacy by other users. This study also allows a deeper understanding of loyalty from the point of view of multi-brand users, identifies certain novelties, and confirms existing findings that can advance the study of e-wallet services.

4.1.2. Managerial implications

The findings here show that e-wallet service providers need to maintain and expand their network and basic features (such as payment methods and the ability to transfer money to other users or bank accounts). This study supports the idea that e-wallets must fulfill customer demands by offering a valuable and practical service like other financial products categorized as utilitarian services (Lu et al., 2016).

Therefore, for the initially launched brand or service to the market, this study also suggests these brands do a promotion or introduce new features, due to these acts proven effectively to enhance brand awareness and attract user intention, especially for young people (Windasari et al., 2022). However, while promotion can successfully attract customers, it does not create a strong enough impact to support a long-term relationship, especially given the intense rivalry in this industry (Databoks, 2021; Snapchart, 2021). Nonetheless, spoiling promotion in the form of incentives leads to switching behavior rather than loyalty, which will become an issue for e-wallet services trying to obtain organic users (Olson & Jacoby, 1974; Sudjarmiko, 2020).

As digitalization becomes more mature, the present system can make the customer the primary driver of its operations (Barroso & Laborda, 2022). Therefore, e-wallet services should direct the financial benefits in multiple directions. In addition to providing short-term incentives, providers can direct the financial benefit with other functions, such as by implementing a feature that enables users to spend their money more wisely by customizing the service features to their specific needs. Due to the market's tendency toward similarity in e-wallet services, providers must offer features that differentiate and help customers understand why using a specific e-wallet provider is necessary.

For instance, providers can be aware of the current problems concerning e-wallet customers, such as their worries that they cannot control their spending due to using e-wallets (Madjid & Partners, 2019). This issue has affected both e-wallet users and, indirectly, the companies they might leave due to a concern about choosing another cashless payment method that makes them not wasteful. To cope with this issue, e-wallet service providers could offer a feature that allows customers to track their spending across all categories (e.g., e-wallet expenses on the vehicle, e-commerce, and other bills) directly in the e-wallet application or even set spending limits for specific outcome categories. On the other side, e-wallet services have consistently worked to grow their network through merchant partnerships or even with institutions or workplaces where employees are encouraged to use the service.

4.2. Limitations and further research

While this study offers a unique contribution and addresses a gap in research on MBL, particularly in the context of e-wallet services, it does have certain limitations that can serve as valuable insights for future research enhancements. First, due to the research objectives and limitations, this research focuses on particular external influences, namely brand advocacy from other users, social pressure, financial benefits, and network externalities, to understand e-wallet users' behavior. Future research could explore other external influences, such as marketing and advertising strategies. This study also demonstrates that certain areas warrant further exploration and hold potential for improving our comprehension of the MBL issue. For instance, investigating how varying income levels can influence individuals' attitudes and behaviors toward multi-brand usage could be particularly enlightening.

Second, although this study tries to minimize common method bias through various procedural strategies, future research could apply better strategies. For example, researchers could consider employing statistical techniques like those outlined by Jordan and Troth (2020), such as Harman's one-factor test or the instrumental variable technique. Third, this study focuses on understanding Millennials generally without categorizing them according to more specific conditions or behavior types. At the same time, many Millennial's categorizations will impact their behavior (IDN, 2020). Future research could focus on Millennials who engage in specific acts, such as online gamers or streaming enthusiasts, and then understand MBL in terms of e-wallet brand collaboration across service industries. Future research could also compare the MBL among Millennials and Gen-Z because e-wallet adoption is prevalent among the technology-savvy in both groups.

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