# E-grocery service loyalty: integrating food quality, e-grocery quality and relationship quality (young customers' experience with local food)

E-grocery service lovalty

87

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### Abstract

**Purpose** – This study aims to evaluate the loyalty formation model on e-grocery service incorporating food quality, e-grocery quality and relationship quality as determinants of loyalty.

**Design/methodology/approach** – The quantitative approach was used by using 353 data from young Indonesian customers with purchasing experience of local food through e-grocery service. The hypothesized relationships between variables were tested using partial least squares structural equation modeling.

**Findings** – The results confirm that local food quality, e-grocery service quality and the relationship quality elements of a sense of community and attitudinal attachment, are all loyalty drivers. Next, mediation tests reveal that local food quality and e-grocery service quality influence customer loyalty through customers' attitudinal attachment and a sense of community.

**Practical implications** – This study recommends that managers of e-grocery services of local food businesses could benefit from the development of attachment and a sense of community among their young clients. Furthermore, to develop loyalty among young customers, offering high-quality local food as well as e-grocery services is suggested.

**Originality/value** — To the best of the author's knowledge, this is the first examination of the e-grocery service loyalty in the context of local food.

**Keywords** E-grocery, Loyalty, Local food, Food quality, Relationship quality

Paper type Research paper

# Introduction

Recent research in e-commerce shows that e-grocery is a popular method for purchasing groceries. Throughout the COVID-19 pandemic, this purchasing medium became a preferred method for purchasing groceries as it posed a lower health risk compared to visiting retailers (Fetriyuna, 2022; Jung et al., 2022; Zhang et al., 2022). As a consequence, the e-grocery business has attracted many business players causing intense competition



International Journal of Quality and Service Sciences Vol. 16 No. 1, 2024 pp. 87-102 © Emerald Publishing Limited 1756-669X DOI 10.1108/IJQSS-06-2023-0080 (Cappelli *et al.*, 2022; Ferguson and Thompson, 2021). Arguably, in this competitive industry, businesses need to create and maintain loyal customers (Mortimer *et al.*, 2016). In the absence of face-to-face contact, both customers and buyers rely on the online platform to make transactions. Therefore, for customers, it is important that online platforms contain the means to any information that can help customers make judgments based on both the seller and the product. For sellers, participating in an online system that is informative, easy to operate and facilitates customer feedback is crucial. However, because online platforms such as e-grocery enable customers to easily compare products and prices as well as buy from a wider variety of suppliers, developing loyalty to a particular supplier is challenging (Franzidis *et al.*, 2023; Soni and Vohra, 2022). Therefore, finding innovative marketing as the basis for creating loyalty-building strategies is important.

Numerous loyalty studies in e-commerce have concluded that product and e-service quality are the building blocks of loyalty (Kühn et al., 2020; Shah et al., 2020). However, due to the dynamic nature of the e-commerce business environment, scholars (Alagarsamy et al., 2021; Soni and Vohra, 2022) contend that further research to find ways to develop loyalty is highly recommended. Driven by this contention, the authors argue that in the online grocery business, relationship quality, i.e. a psychological bond with a brand, product or business entity (Hudson et al., 2015) is a key factor in developing loyalty. This argument is driven by past studies indicating that relationship quality is a key driver for maintaining profitable relationships for offline and online businesses alike (Alagarsamy et al., 2021; Steinhoff et al., 2019). Furthermore, scholars (Antwi, 2021; Hudson et al., 2015) suggest that relationship quality not only directly impacts customer behavior, it shapes the effect of a customer's purchase and consumption experience on their future behavior. For e-grocery businesses where a customer's purchasing tends to be repetitive and habitual (Mortimer et al., 2016), having a high-quality relationship potentially helps foster customer loyalty.

While developing loyalty for e-grocery services is challenging, the development of loyalty for e-grocery local food is more challenging. Local food, a food associated with local farmers, freshness and environmentally-friendliness (Apak and Gürbüz, 2023; Barska and Wojciechowska-Solis, 2020; Zhang et al., 2022), has gained in popularity, leading many retailers source more local food for their offerings (A. Kumar and Smith, 2017). However, unlike food in general, local food is purchased for complex reasons that are not only pragmatic, such as to obtain quality, but also altruistic, such as to demonstrate solidarity with local farmers and concern for the environment. (Dudziak et al., 2023; Memery et al., 2015; Zhang et al., 2022). With these additional purchasing requirements, fostering loyal customers is more challenging for e-grocery local food retailers (Cahyono, 2023; Lopez et al., 2018). While the issue of the importance of developing e-grocery loyalty for local food is apparent, there remains a lack of studies dedicated to evaluating this issue.

Concerning the recognized gaps, this study assesses the formation of loyalty toward purchasing local food via e-grocery services. Specifically, this study (1) predicts loyalty toward e-grocery service for purchasing local food, including food quality, e-grocery quality and relationship quality as its determinants and (2) scrutinizes the relationship quality mediating role on the association between loyalty and its determinants. This research targeted young consumers in Indonesia for several reasons. First, about 85 million of the Indonesian population are between 18 and 35 years (Statistics, 2020). These young consumers are of the generation who adore local products and are more comfortable with the use of Internet technology (Taufique and Islam, 2021). Thus, they are a potential market for local foods sold via e-grocery services. Second, due to their awareness of local/traditional food, Indonesian consumption of local food purchased online has increased significantly (Cahyono, 2023; Fetriyuna, 2022;

Rochman et al., 2021). Accordingly, comprehending their behavior is critical for building sustainable business strategies for any local food e-grocery business.

# Theoretical framework and hypotheses development

Loyalty toward e-grocery service

Loyalty is an individual's commitment to purchase and patronage of a product (Oliver, 1999). This definition suggests that a loyal customer toward e-grocery service will purchase the food online whenever possible despite the marketing competitors' efforts. Thus, in online grocery retailing, having loyal customers is an essential strategy for success (Kühn *et al.*, 2020). In online food purchasing, food is purchased to satisfy both psychological and physiological needs with no direct contact with retailers. As a result, customers tend to intensively assess food products before purchasing, and this extra caution inhibits loyalty development (Soni and Vohra, 2022; Yasami *et al.*, 2021). However, once customers are loyal, they are less sensitive to price changes and the marketing messages of competitors, so building and maintaining strong bonds with customers is an important strategy for online businesses to develop competitive advantages (Cahyono, 2023).

Many approaches have been developed to assess loyalty, and the most widely applied are the behavioral and attitudinal approaches. The behavioral approach postulates that a loyal customer is a person who, over a specific time, will systematically buy a product (Ehrenberg and Scriven, 1999). This approach assesses loyalty by measuring the amount of food purchased and the frequency of the purchases (Izquierdo-Yusta et al., 2022; Lopez et al., 2018). This approach does not distinguish customers who have strong feelings towards a particular product from those who repeatedly choose the product for convenience or price reasons (Suhartanto et al., 2020). The second approach is attitudinal loyalty, often called loyalty intention, and measures loyalty based on an individual's propensity to repurchase and endorse. Although it is criticized that intentions do not necessarily become actions (Kandampully and Suhartanto, 2000), the attitudinal approach helps researchers assess loyalty strength which is useful for predicting a customer's future behavior. The attitudinal approach has been widely used to assess loyalty in both e-grocery and local food contexts (Alagarsamy et al., 2021; Ali et al., 2020; Severt et al., 2022). For this reason, this study assesses loyalty toward e-grocery services using the attitudinal approach, measuring loyalty as the intention to repurchase and endorse.

### Quality-loyalty model in e-grocery service

Literature on consumer behavior reveals several conceptual models to elucidate loyalty formation. Among those models, the quality-loyalty model (Cronin *et al.*, 2000; Dean and Suhartanto, 2019) suggests that product and service quality are the key drivers of loyalty, and is commonly applied to assess loyalty. The underlying assumption of the model is that product/service quality, measured as a client's assessment of the ability of the product/service to satisfy their needs, is likely to influence a customer's future behavior; essentially loyalty is a logical consequence of the quality of the product/service. Empirical evidence of a positive association between product quality, service quality and customer loyalty has been well-presented in past studies (Pahlevi and Suhartanto, 2020; Suhartanto *et al.*, 2019; Zhang *et al.*, 2020a, 2020b). In the current context, the authors contend that the local food quality and e-grocery service quality are the main drivers of loyalty toward local food via e-grocery.

Food quality denotes the food's capacity to fulfill needs through its elements (Suhartanto et al., 2019). For local food, additional and often less tangible quality characteristics are considered, such as the location where it grows, distance to market, transport mode, harvesting timing and methods and other issues related to environmental friendliness and sustainability (Barska and Wojciechowska-Solis, 2020; Severt et al., 2022). Previous studies in e-commerce confirm that if

customers perceive that food is of high quality, they want to repeat the experience in the future (Pham and Ahammad, 2017). In local food, Cappelli *et al.* (2022) report that locally grown food is a strong indication of the food's perceived quality and has a favorable effect on consumer intention to purchase. Furthermore, Zhang *et al.* (2019) reveal that local food quality significantly impacts repurchase intention. Similarly, Memery *et al.* (2015) report that food quality determines the consumption of local food and behavioral intention:

# H1. Food quality directly and positively affects loyalty.

The quality of e-grocery service denotes a client's overall experience in purchasing groceries online (Kühn *et al.*, 2020). It indicates how the service enables customers to purchase their grocery needs efficiently and safely. Thus, providing a quality e-grocery service is vital for e-grocery businesses. Throughout the COVID-19 pandemic, to prevent the spread of disease, online services became important systems to limit the physical interaction between food customers and retailers (Jung *et al.*, 2022). Past studies in e-commerce reveal that if customers perceive that the e-service is reliable and trustworthy, their perception of the e-service will be stronger, subsequently influencing their preference and intention to repeat the experience (Lopez *et al.*, 2018; Soni and Vohra, 2022):

H2. E-grocery quality directly and positively affects loyalty.

# Relationship quality

Hudson *et al.* (2015) maintain that relationship quality is a customer's psychological and emotional connection with a product, brand or firm. In this study context, it represents customers' feeling positively or negatively toward their relationship not only with the local food but also toward the providers. Scholars (Antwi, 2021; Steinhoff *et al.*, 2019) believe that relationship quality is a key factor in building beneficial associations with customers. Furthermore, past studies conclude that relationship quality is a complex concept containing numerous elements such as attitudinal attachment, behavioral associations, satisfaction, trust and a sense of community (Antwi, 2021; Steinhoff *et al.*, 2019; Tajvidi *et al.*, 2021). The presence of these elements can result in a lasting and positive association with a brand, product or business entity. Furthermore, a recent study on online grocery reveals that the relationship quality components of attitudinal attachment, sense of community and trust are loyalty drivers (Alagarsamy *et al.*, 2021). Thus, this study assesses relationship quality with attitudinal attachment, trust and a sense of community.

Attitudinal attachment refers to an individual's feeling of affection toward an object, leading the person to feel the object is special (Alagarsamy et al., 2021). This feeling leads the person to have a favorable relationship with the object. If felt consistently over time, it causes a person to be involved with the object and some cases consider the object irreplaceable. Such an attachment to a product exhibits an alignment between self-concept and experience with a product or the business (Morgan and Hunt, 1994). The longer the association with the product or the business, the stronger the emotional attachment (Hudson et al., 2015). Scholars (Keller, 2009; Tajvidi et al., 2021) maintain that an individual develops an affection toward a product over a period causing an intense attachment that produces a strong sense of loyalty toward the product. In local food e-groceries, this discussion implies that a person's experience with the quality of food and e-service will positively impact their attachment to the product, which impacts their future behavior:

- H3. Food quality directly and positively affects attitudinal attachment.
- H4. E-grocery quality directly and positively affects attitudinal attachment.

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H5. Attitudinal attachment directly and positively affects loyalty.

A sense of community refers to members' feelings of belongingness, that members matter to each other and the group, they share common beliefs and values and that member needs will be met through their commitment to one another (McMillan and Chavis, 1986, p. 9). Tsai (2016) maintains that a person who is culturally and emotionally connected to an association is inclined to associate themself with a certain location or place of the association. In the local food context, scholars (Russomanno and Tree, 2021) believe that this connection strengthens someone's emotional and psychological connection with local farmers and marketers of local foods. Past studies report that customers who favor local food, tend to look for food from socially-responsible growers (Cappelli *et al.*, 2022; Russomanno and Tree, 2021) note that if shoppers of local food experience a sense of community and feel involved with local growers, they are likely to continue supporting local growers:

- *H6.* Food quality directly and positively affects a sense of community.
- H7. E-service directly and positively affects a sense of community.
- H8. A sense of community directly and positively affects customer loyalty.

### Trust

Ventre and Kolbe (2020) maintain that trust, which in e-commerce, designates a client's confidence that a product and service provider will fulfill their assertion. In e-commerce, care, commitment, competence and honesty are elements of trust toward the product, e-service or vendor (Elbeltagi and Agag, 2016; Punyatoya, 2019). For local food that is sold online, customer trust generally relies on food certification (Barska and Wojciechowska-Solis, 2020). Local foods that have trusted certification is one way to gain customer trust. However, a customer's knowledge of the certification of local food is often incomplete, and local food vendors may provide false certification (Rahman et al., 2021). In addition to trusted certification, customer trust is developed based on their perception of the localness of the food (Rahman et al., 2021). Finally, in an online grocery study, Mortimer et al. (2016) report that customers' trust has a positive impact on purchasers' behavior.

- H9. Food quality directly and positively affects trust.
- H10. E-service quality directly and positively affects trust.
- H11. Trust directly and positively affects loyalty.

### Mediation *role* of relationship quality

The stimulus—organism—response theory suggests that people are exposed to stimuli that influence them somehow, and subsequently drive their behavior (Mehrabian and Russell, 1974). Using this framework in the current study, the quality of local food and e-grocery service are the stimuli that drive the customer to purchase the food. Loyalty, measured by repeat purchases and intention to endorse, is the response from the experience of consuming the local food and using the e-grocery service. However, customer experience with the quality of food and e-grocery service also results in building attachments between customers and the e-grocery retailers. These attachments can strengthen the effect of the quality of local food and e-grocery service stimuli on the loyalty response. In other words, the relationship quality mediates the association between product/service quality and

loyalty. Furthermore, extant research supports the notion that relationship quality is a path between customer experience/assessment and post-purchase behavior (Alagarsamy *et al.*, 2021; Ali *et al.*, 2020; Tajvidi *et al.*, 2021). This discussion leads to the following hypotheses:

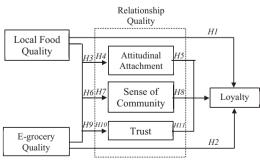
- H12. Relationship quality mediates the association between food quality and customer loyalty.
- H13. Relationship quality mediates the association between e-grocery quality and customer loyalty.

Figure 1 summarizes the hypothesized relationships of the variables.

### Research method

The constructs in this research have been assessed in past studies, so the measurement of those variables uses scales and items adapted from existing literature. Following Zhang et al. (2020a, 2020b), this study uses respondent perception of localness to measure the geographic boundaries of region-specific food, based on the information available on the website of the food vendors. Local food quality was judged with five items (Ali et al., 2020; Severt et al., 2022; Zhang et al., 2019). To measure e-grocery quality, seven indicators were adapted (Suhartanto et al., 2019; Yeo et al., 2017). Attitudinal attachment and loyalty were assessed by three items (Alagarsamy et al., 2021). Trust was evaluated with five items (Mortimer et al., 2016; Suhartanto et al., 2022). A sense of community was measured with five items (Kumar, 2021; Lardier et al., 2022; Peterson et al., 2008). Loyalty was assessed by three items of repurchase and endorse intention (Mortimer et al., 2016; Severt et al., 2022). All the items used Likert scales attached by "1: strongly disagree" and "5: strongly agree." Before the questionnaire pilot testing, two experts on local food and e-commerce were asked to check the suitability of the content and the scale clarity.

With no sampling frame available, the sampling method used in this study is purposive sampling, targeting young customers (17–35 years old) who have experience in buying local food via e-grocery services. The survey assistants coordinated the data gathering process in the West Java region in July – August 2022. In consideration of the Covid-19 pandemic restrictions, respondents were requested to respond to an online survey. Among the 353 participants, 22% were male, and 78% were female. Their age distribution comprised 54% between 17 and 25 years old and 46% between 26 and 35 years old. In terms of education, 4% attended/completed high school, 28% attended/completed a diploma degree and the rest attended/completed a university degree. Of the occupations, 36% were students, 53% were



**Figure 1.**The loyalty formation of e-grocery service for local food

Source: Authors' own work

employees and 11 reported other occupations. Finally, in terms of average e-grocery shopping frequency, 48% shopped once/month, 43% shopped two to five times/month and 9% shopped more than five times/month.

Hair et al. (2017) suggest that partial least squares structural equation modeling (PLS-SEM) is suitable for evaluating and validating theoretical models. Following this suggestion, this study used PLS-SEM to assess the e-grocery loyalty formation model and to examine the hypothesized associations between the variables. Furthermore, this method was used to determine the predictive power of the exogenous variables on e-grocery loyalty. Next, the PLS was used to assess the constructs' validity as well as reliability. Similarly, PLS was used to test the mediation role of relationship quality components on the effect of food quality and e-grocery service on e-grocery loyalty. Finally, PLS-SEM was applied to evaluate common method variance, resulting in the value of variance inflation factor (VIF) less the cut-off value of 3.3. This result suggests that common method variance is not an issue in this research.

### Results

Measurement model

The first step in the PLS-SEM is the assessment of the model's measurement, including the validity and reliability of the constructs by using Cronbach's alpha (CA), composite reliability (CR), average variance extracted (AVE) and factor loadings. Table 1 reveals that each item had loadings greater than 0.6. The reliability and validity requirements are satisfied as CA and CR values were greater than 0.7 and AVEs values were higher than the 0.5 recommended value (Hair *et al.*, 2017). To judge the discriminant validity of the variables, this research used the Heterotrait–Monotrait (HTMT) as advocated by Henseler *et al.* (2015). All the construct HTMT indicators were less than 0.9, satisfying the discriminant validity requirement.

### Structural model

Hair *et al.* (2017) recommend the utilization of 5,000 sample iterations for the bootstrapping method. Following this recommendation, the data analysis reports the Tenenhaus goodness-of-fit index value of 0.529, indicating the model had adequate fit (Tenenhaus, Vinzi, Chatelin and Lauro, 2005). Furthermore, the normal fit index value was 0.758, and the standardized root mean square residual value was 0.068, further suggesting adequate model fit. The  $R^2$  of loyalty was 0.480 indicating the determinants have a large effect on loyalty (Silva *et al.*, 2014). Finally, the  $Q^2$  value of loyalty was 0.362, indicating the predictive relevance of the endogenous constructs are sound (Hair *et al.*, 2017). With all these indicators, the requirements of model structure and fit are fulfilled.

The direct effect column in Table 2 shows that food quality's effect on loyalty (0.178), attitudinal attachment (0.348), trust (0.525) and sense of community (0.127) are significant at p < 0.01 and p < 0.05. Similarly, the effect of e-grocery quality (0.149), attitudinal attachment (0.304), trust (0.317) and sense of community (0.234) on loyalty are significant at p < 0.01. Next, while the influence of attitudinal attachment and a sense of community on loyalty are significant at p < 0.01 (0.261 and 0.227), the effect of trust on loyalty is not significant (p > 0.05). Thus, hypotheses H1 to H10 are supported but H11 is not. Finally, the total effect column informs that customer loyalty is driven significantly by food quality, e-grocery quality, attitudinal attachment, as well as a sense of community but not driven by trust.

IJQSS 16,1	Variables/indicator	Loading*	CA	CR	AVE
94	E-grocery quality (mean: 4.355, SD: 0.524)  - The transaction payment is secure  - The e-grocery site/app is easy to use  - The e-grocery site/app enables one to find the food easily  - My data is secure  - The food is delivered as promised  - The e-grocery site/app has interesting features  - The transaction is prompt	0.718 0.662 0.662 0.681 0.731 0.810 0.701	0.836	0.877	0.505
	Food quality (mean: 4.413, SD: 0.491)  - The food is fresh  - The food tastes good  - The food is well-packaged  - The food is nutritious  - The variety of food is good	0.693 0.677 0.767 0.809 0.778	0.800	0.862	0.557
	Sense of community (mean: 4.096, SD: 0.66)  – I feel close to local farmers  – What happens to local farmers influences me  – I prefer to buy my food from local farmers  – I feel a connection with local farmers  – I feel happy when local farmers prosper	0.779 0.852 0.853 0.853 0.886	0.899	0.926	0.714
	Trust (mean: 4.396, SD: 0.520)  - Vendor is trusted  - Food grower is trusted  - Trust that the personal data is safe  - Trust in the food quality  - Trust that the food ingredients are hygienic	0.782 0.765 0.761 0.821 0.765	0.838	0.885	0.607
	Attitudinal attachment (mean: 4.331, SD: 0.548)  — I love purchasing local food through e-grocery  — I feel an attachment to the e-grocery service provider  — I like purchasing local food via e-grocery	0.839 0.791 0.726	0.695	0.829	0.619
Table 1. Loading of the item measurement model, CRA, CR and AVE	Loyalty (mean: 4.83, SD: 0.802)  — I intend to repurchase local food via e-grocery service  — I intend to recommend e-grocery purchasing of local food  — I intend to say positive on e-grocery purchasing of local food	0.853 0.880 0.881	0.842	0.905	0.760
	<b>Notes:</b> *Significant at $p < 0.01$ ; SD = Standard deviation <b>Source:</b> Authors' own work				

### Mediation test

To examine the relationship quality meditation role, the bootstrap method with a bias-corrected confidence estimate test was applied (Preacher and Hayes, 2004). As the link between loyalty and trust is insignificant (0.082, p > 0.05), trust does not mediate the association between both the quality of food and e-grocery service on loyalty. Next, testing the mediation role of attitudinal attachment and sense of community (Table 3) shows that the link between the dependent and independent variables as well as with mediation of relationship quality factors are significant. Furthermore, the bootstrap values, 6.353 for attitudinal attachment and 4.369 for a sense of community are significant at p < 0.01. Next, the  $\beta$  value of the relationship between e-grocery service and loyalty without mediation

Relationship	Direc β	ct effect t-value	Indire β	ect effect t-value	Tota β	al effect t-value	E-grocery service loyalty
Food quality → loyalty (H1)	0.178	3.099**	0.163	2.949**	0.340	5.703**	
E-grocery quality $\rightarrow$ loyalty ( <i>H2</i> )	0.149	2.252*	0.159	3.522**	0.307	5.145**	
Food quality $\rightarrow$ attitudinal attachment (H3)	0.348	4.498**	-	_	0.348	4.498**	
E-grocery quality $\rightarrow$ attitudinal attachment ( <i>H4</i> )	0.304	3.723**	_	_	0.304	3.723**	
Attitudinal attachment $\rightarrow$ loyalty ( <i>H5</i> )	0.261	4.054**	_	_	0.261	4.054**	95
Food quality $\rightarrow$ sense of community ( <i>H6</i> )	0.127	1.984*	_	_	0.127	1.984*	
E-grocery quality $\rightarrow$ sense of community (H7)	0.234	3.452**	_	_	0.234	3.452**	
Sense of community $\rightarrow$ loyalty ( <i>H8</i> )	0.227	4.193**	_	_	0.227	4.193**	
Food quality $\rightarrow$ trust (H9)	0.525	8.667**	_	_	0.525	8.667**	
E-grocery quality $\rightarrow$ trust (H10)	0.317	4.706**	_	_	0.317	4.706**	
Trust $\rightarrow$ loyalty (H11)	0.082	0.941	_	_	0.082	0.941	Т-1-1- 0
<b>Notes:</b> **Significant at $p < 0.01$ ; *Significant at $p < 0.05$ <b>Source:</b> Authors' own work					<b>Table 2.</b> Structural estimate of the relationship		

	Media	tor	
	Attitudinal attachment	Sense of community	
Relationship between e-grocery quality a	and loyalty	_	
E-grocery → mediator	0.538**	0.324**	
Mediator → loyalty	0.414**	0.328**	
E-grocery → loyalty <sup>a)</sup>	0.547**	0.547**	
E-grocery → loyalty b)	0.319**	0.439**	
Confidence interval	0.215-0.437	0.214-0.431	
Bootstrap value	5.758**	4.206**	
Relationship between food quality and lo	oyalty		
Food quality → mediator	0.554**	0.286**	
Mediator → loyalty	0.408**	0.344**	
Food quality → loyalty <sup>a)</sup>	0.546**	0.546**	
Food quality → loyalty b)	0.319**	0.447**	
Confidence interval	0.212-0.416	0.375-0.528	
Bootstrap value	6.353**	4.369**	Table 3
Notes: a) Without mediation; b) with me	adiation, **CimiCoont at t < 0.01		The result of the
<b>Source:</b> Authors' own work	ediation; ""Significant at $p < 0.01$		mediation tes

(0.547) is higher than with mediation (0.319 and 0.439) suggesting that the mediation role of attitudinal attachment as well as a sense of community is partial. Similarly, the  $\beta$  value of the linkage between food quality and loyalty without mediation (0.546) is higher than with mediation (0.319 and 0.447) suggesting that the mediation role of attitudinal attachment as well as a sense of community is partial. Thus, hypothesis H12 is partially supported for the mediation role of both attitudinal attachment as well as a sense of community, and the mediation role of trust is not supported.

# Discussion

First, this study examines the loyalty of young customers toward e-grocery service for purchasing local food using a model integrating food quality, e-grocery quality, as well as

relationship quality assessed by attitudinal attachment, sense of community and trust. The results show that the integrated e-grocery loyalty model fits and most of the hypothetical relationships are significant, suggesting that the quality of food, e-grocery service, as well as relationship quality can be successfully integrated as the e-grocery loyalty drivers. This result is important as it builds on existing quality-loyalty models (Dean and Suhartanto, 2019; Kandampully and Suhartanto, 2000) and adds the impact of the relationship quality component of attitudinal attachment, trust and a sense of community as determinants of loyalty (Russomanno and Tree, 2021; Zhao and Wise, 2019) in the context of local food e-grocery shopping. For e-grocery shopping, the presence of local food quality, e-grocery service quality and emotional and psychological bonding encourage repurchase and intention to endorse local food e-grocery purchasing.

Second, this study reveals that food quality, e-grocery quality, attitudinal attachment, as well as a sense of community, have a significant direct influence on loyalty. This finding suggests that these factors are crucial aspects in developing young customers' loyalty toward purchasing local food via e-grocery service. However, among those factors, a sense of community and attitudinal attachment have a bigger direct impact on loyalty. In other words, young customers' loyalty is directly influenced by their sense of community and attitudinal attachment. Thus, although the quality of food and the egrocery are significant factors in determining customer loyalty toward e-grocery service, this finding suggests that customers are strongly driven by their bond and feeling of being connected with e-grocery providers. The importance of a sense of community and attachment suggests that consumption of local food purchased via e-grocery is driven more by customer relatedness to local-ness rather than solely on the functionality of the food (Cappelli et al., 2022; Franzidis et al., 2023; Memery et al., 2015). The importance of both attitudinal attachment and a sense of community in affecting loyalty is in line with Alagarsamy et al. (2021) findings in online grocery in general. However, while Alagarsamy et al. (2021) report that the sense of community is the main cause of loyalty, in this study both a sense of community and attitudinal attachment have roughly similar effects in creating long-term relationships between e-grocery retailers of local food and their customers.

Third, although the direct effects show that attitudinal attachment and a sense of community have a stronger effect on loyalty, the total effect test results that food quality and e-grocery quality have a larger total impact on loyalty. The important role of food quality in significantly influencing loyalty corroborates the Zhang et al. (2019) findings in their study on local food in China and Denmark. Next, the importance of e-service quality highlights Cahyono (2023) model on the adoption of an online purchasing system for local food which indicates the key role of technical quality as an intention driver. The importance of the quality of local food quality and e-grocery service's total effect on loyalty is the result of the mediating effect of relationship quality, i.e. attitudinal attachment and sense of community. In other words, besides directly impacting loyalty, food quality and e-grocery quality strengthen customers' attachment and sense of community which, subsequently, impacts their intention to repurchase and recommend. This discovery is essential as no one has reported such an issue. Furthermore, this study offers a new understanding of the complexity of the relationship quality role in developing e-grocery loyalty in purchasing local food.

### Theoretical contribution

First, this research extends the quality-loyalty model (Dean and Suhartanto, 2019; Kandampully and Suhartanto, 2000) in the context of local food purchased through

e-grocery service among young customers by integrating food quality, e-grocery service quality and relationship quality. Besides widely known loyalty drivers of product and e-service quality in e-commerce, the integration of relationship quality (assessed by trust, sense of community and attitudinal attachment) into the quality-loyalty model provides a better explanation of how young consumers develop loyalty toward e-grocery service for purchasing local food. The contribution of this study, from a theoretical perspective, is apparent in the loyalty model fitness, suggesting that the integration of food quality, e-grocery quality and relationship quality are crucial loyalty drivers. Second, from the perspective of relationship quality, besides confirming its role as a loyalty determinant as has been reported in other past studies (Rahman et al., 2021; Russomanno and Tree, 2021), this study offers evidence that the framework of Stimulus-Organism-Response (Mehrabian and Russell, 1974) is suitable to explain the association between food quality, e-service quality, relationship quality and loyalty in the e-grocery of local food context.

# Managerial implication

First, the important role of relationship quality revealed in this study recommends that managers of e-grocery services of local food businesses could benefit from the development of attachment and a sense of community among their young clients. To develop attachment and a sense of community, as also suggested in past studies (Kumar, 2021; Zhao and Wise, 2019), managers should exploit promotional and informational strategies. In those strategies, marketing managers need to link the local food to the producers in the minds of the customers. Links to the producers in the e-grocery site give the local food customers a window into the farmers, systems and land that is providing the food. This offers customers a way to identify with and connect with the local food and local farmers that can be a substitute for the face-to-face interactions found in a traditional farmer's market. Offering programs to virtually visit local growers could also help customers familiarize themselves with producers and their farming activities.

Second, this study stresses that local food quality is an important aspect in driving loyalty toward purchasing local food via e-grocery service. This finding suggests that managers of e-grocery business managers offering e-grocery services for local food to get full attention on the quality of their local food. In developing the quality of local food, it is suggested that the managers need not only to pay attention to the food taste, attractiveness and healthiness as they are considered basic elements that the e-grocery managers have to offer (Apak and Gürbüz, 2023; Tsai, 2016) but also an innovative local food to deal with their constantly changing customer demand (Ali *et al.*, 2020). Offering quality innovative local food could help e-grocery businesses keep current clients loyal and attract new clients. Therefore, it is suggested that e-grocery managers select and collaborate with trusted local farmers to grow and supply innovative foods.

Finally, this study highlights the quality of e-grocery service as a crucial driver of customer loyalty. This finding offers options to managers of e-grocery service businesses offering e-grocery services to expand the performance of their business. As in the broader e-grocery business, local food cannot be smelled, touched or tasted, so having a high-quality website is crucial. To develop customer confidence in local food providers' products, understandable and clear information should be presented on the e-grocery site. Providing a high-quality virtual reality presentation that demonstrates how local food is grown, processed and impacts the environment is important to convince and persuade customers to be loyal. Moreover, considering the importance of trusted certification for

local food, comprehensive information on the certification should be available on the egrocery site.

### Limitations and future research

First, the data was gathered from young local food customers in West Java, Indonesia, and this could limit the generality of its findings. The issue of this study's generalization can be resolved by repeating this study in other areas or countries. Examining the proposed model on generation cohorts also possibly expands our comprehension of the customer experience in buying local food via e-grocery service. Further study could analyze the experience based on demographic elements such as education, income and gender as these aspects were reported to influence consumer attitudes and behavior toward purchasing local food online (Cahyono, 2023; Memery *et al.*, 2015). Second, this study includes food quality, e-grocery quality and relationship quality for predicting young customer loyalty. Considering the significance of other loyalty determinants such as relational bonds, perceived risk and authenticity of local food (Mortimer *et al.*, 2016; Ventre and Kolbe, 2020; Zhang *et al.*, 2019), further study could include those factors in the loyalty model.

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IJQSS 16,1

102

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