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Review Dimensions' Impact on Customer Decision in E-Marketplaces: A Partial Least Squares-Structural Equation Modeling

أثر أبعاد التقييم على قرار الزبون في الأسواق الإلكترونية: نموذج معادلات هيكلية باستخدام المربعات الجزئية الصغرى

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Abstract

The paper aimed to examine how online review dimensions impact customer decision in e-marketplaces. A survey was sent to 154 customers who made purchases online in the last three months. The data collected was analyzed utilizing a PLS-SEM technique on SmartPls 4 software. The results suggested that customer decision was positively and directly influenced by product rating, as consumers progressively rely on peer-generated content for purchase decisions. The findings of the research may be shown to have theoretical implications by providing a model that connects review dimensions with customer decision-making process, and from a practical perspective, the results may be of interest to new and established businesses and e-marketplace operators to leverage rating systems, in order to improve performance.

Keywords: Review quantity, Review consistency, Reviewers' expertise, Product rating, Customer decision.
JEL classification: M31, L81.

ملخص

هدفت هذه الورقة البحثية إلى فحص كيفية تأثير أبعاد التقييم عبر الإنترنت على قرار الزبائن في الأسواق الإلكترونية .تم إرسال استبيان إلى 154 زبون قاموا بعمليات شراء عبر الإنترنت في الأشهر الثلاثة الماضية . تم تحليل البيانات المجمعة باستخدام تقنية *PLS-SEM* على برنامج *SmartPls 4* . أشارت النتائج إلى أن قرار الزبون تأثر بشكل إيجابي ومباشر بتقييم المنتج، حيث يعتمد المستهلكون بشكل متزايد على المحتوى الذي ينشئه الأقران لاتخاذ قرارات الشراء .يمكن إظهار أن نتائج الدراسة لها آثار نظرية من خلال اقتراح نموذج يربط أبعاد التقييم بعملية اتخاذ القرار لدى الزبون، ومن منظور عملي، قد تكون النتائج ذات أهمية للشركات الجديدة والقائمة، ومديري الأسواق الإلكترونية لاستغلال أنظمة التقييم، من أجل تحسين الأداء.

الكلمات المفتاحية: كمية التقييم، ثبات التقييم، خبرة المراجعين، تقييم المنتج، قرار الزبون.

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1. Introduction

The advent of the web and data technologies has brought about profound adjustments to the marketing environment, especially after the onset of Web 2.0 techs. To survive and compete in the marketplace, companies and firms have all begun to build their own online commerce environments (Kang, 2012). Peer consumer reviews act as indirect electronic word-of-mouth (eWOM) communications related to products between consumers. Customer reviews have become a widely used tool in e-commerce. Concerns over the credibility of information found in e-marketplaces such as the perceived promotional intent of customer reviews, perceived trustworthiness, and perceived usefulness have also garnered much attention (Forouhandeh et al., 2022). In order to maintain their success, understanding how and when customer reviews and product consumer satisfaction influence the customer decision-making procedure become imperative (Sardar et al., 2021).

E-commerce (EC) has witnessed remarkable growth, and the Covid-19 outbreak has accelerated this growth. As a consequence, the development of advanced information technology leads consumers to encounter increasing external environments of the EC marketplace (Gharib et al., 2019). In addition to this phenomenal growth, EC channels have appeared in diverse forms of platforms, and consumers have more opportunities for market choice (Dwidienawati et al., 2020). The prosperity of an EC channel or platform bank largely on the vitality of the marketplace, especially "electronic word-of-mouth (eWOM)", in which customers post information about the product and retailers, and recent development of technology has enabled this kind of information transmission on the Internet. EC retailers strive to leverage eWOM in creating and spreading a buying experience, and the integration of eWOM, which is seized by a third party, into the shopping process on the EC site has been considered one of the valuable weapon in competing with rival retailers (Kato, 2022).

Consumers evaluate not only the content of reviews but also the agent producing reviews. This notion is commonly examined in the context of eWOM communications from other consumers or experts. This study focuses on the agent producing reviews, and the equivalence of the perceived influences on purchase intention between review agents posted by customers

and social media influencers. Customer review as one form of eWOM conducts consumers' online shopping experiences by retrieving appropriate products and providing the associated information to assist in decision-making. This kind of information is easily accessed online since customers prefer sharing their experiences and recommendations on the product and retailer at an individual level (Jin et al., 2022). The synergistic effects of customer reviews against perceived risk and trustworthiness have been confirmed. Based on consumers' characteristics and situations, customer reviews may contribute to the creation of satisfaction and intention of repurchase in EC scenarios (Dwidienawati et al., 2020).

With virtually all product categories being sold in e-marketplaces, competition between vendors is increasingly strong. Consequently, several vendors have sought strategies to promote their products in the emerging e-marketplaces, resulting in heavier exogenous influences on consumer purchasing behavior (Köcher, 2018). As complementary to vendors' promotional activities, consumer ratings and reviews on such products in e-marketplaces can be analyzed as a source of endogenous influence that affect potential buyers' purchasing behaviors. Consumer ratings and reviews on such products positively influence viewer interest in the products and enhance product purchase intentions, even in the presence of vendor promotional activities. As information on the products is anticipated to be plentiful, ratings and reviews from other consumers who have either experienced or examined the same products can be considered more impartial and credible than vendor-provided information (Bong Hyun & Hojin, 2021). initiating from the aforesaid, the following study questions can be asked:

RQ1. How does the quantity of reviews for a product influence a consumer's decision to buy?

RQ2. How does the consistency of review content affect customer perceptions of product quality and reliability?

RQ3. How do customers perceive the expertise of reviewers, and how does this perception affect their purchase decisions?

RQ4. How does the overall product rating (e.g., star rating) influence a customer's willingness to buy a product?

To answer these questions, the study tries to examine the connection amongst online reviews dimensions and customer decision-making process

in online marketplaces. Precisely, we empirically explore how these fundamental dimensions of review including quantity, consistency, source expertise, and rating influence customer perception and choosing certain brands or services. By inquiring customers and analyzing data utilizing a "partial least square-structural equation modeling (PLS-SEM)" which is 2nd generation method of analysis that allows the studying of complex models with multiple relationships (Hair et al., 2022). The objective of this research is to enhance scholarly knowledge on the influence of user-generated substance in online marketplaces. The results will provide actionable insights on how e-commerce websites can utilize content created by users to enhance customer perception and enhance overall performance.

The paper starts by introducing the contextual framework and analyzing the literature on this topic. Following this, the study hypotheses are formulated. The methodology and research findings are then outlined, with the discussion section focusing on the connection between review dimensions and customer decision-making, as well as how this study relates to previous literature. Lastly, the conclusions of the research are outlined, identifying the key implications and constraints of the research.

2. Literature review and hypotheses building

2.1 Customer decision-making

Customer decision-making procedure is a compound process that involves various factors and considerations. (Helander, 2000) discusses the information flow between the Store Environment, Customer, and Web Technology in e-commerce, highlighting the importance of understanding these subsystems in influencing customer decisions. (Louvieris & Oppewal, 2004) introduce the concept of "Channel Benefits Portfolio (CBP)" management to notify managers' "channel investment decisions", emphasizing the role of consumer channel selection behavior in the decision-making process. (Lemon & Mark, 2006) explore "Customer Lifetime Value (CLV)" as the foundation for consumer segmentation, pointing out the significance of effective segmentation in understanding customer behavior. (Colgate et al., 2007) delve into the rationale why consumers choose to stay with a service provider, shedding light on the less researched aspect of customer decision-making - the decision to stay. (Wang, 2010) emphasizes

the importance of switching costs in impacting a consumer's judgment to stay with a provider, highlighting the interplay between customer-received value, corporate image, and switching costs. (Chen, 2009) introduces Rough Sets (RS) assumption as a way to enhance consumer satisfaction survey applications, aiming to explore knowledge on consumer behavior trends. (Nilashi et al., 2015) stresses on the factors of Security, Design, and Content in mobile commerce websites that influence customer trust and decision-making. (Ruiz Díaz, 2017) analyzes the factors that impact a customer satisfaction and fidelity in the mobile-phone trade, highlighting the significance of understanding customer fulfilment in assessing customer retention. (H. Zhang et al., 2018) develop a model to examine the use of "Online Product Recommendations (OPRs)" on consumer decision-making and fidelity in social shopping publics, emphasizing the impact of positive and negative factors of "OPRs quality" on the costumer decision procedure and ultimately customer fidelity. Overall, these studies provide valuable perception into the various factors that impact consumer decision-making and the importance of understanding customer behavior in different contexts.

2.2 Review quantity and customer decision

Online consumer reviews noticeably impact consumer purchasing decisions. The quantity of reviews positively affects buying intentions, with more reviews generally leading to increased purchases (D.-H. Park et al., 2007; Vrânceanu, 2017). However, review quality also plays a crucial role, particularly for highly involved consumers. (Keller & Staelin, 1987) explore the influences of data quantity on decision effectiveness, hypothesizing that while information quality improves decision effectiveness, information quantity can decrease it. This suggests that an overload of reviews might hinder consumers' ability to make effective decisions, potentially leading to confusion or decision fatigue. (Wansink et al., 1998) and (Chintagunta, 1993) do not directly address the impact of review quantity on customer decisions. Wansink and others focus on the anchoring and adjustment model in purchase quantity decisions, while Chintagunta investigates the influences of marketing variables on buying incidence, brand selection, and purchase quantity preference, emphasizing the role of reservation prices and intrinsic brand preferences. The impact of reviews is moderated by factors such as product price and consumers' exposure to reviews, with the effect of review

valence being strongest for higher-priced products when customers read many reviews (Maslowska et al., 2017). Interestingly, the order in which consumers make decisions can affect purchase quantities, with decisions about less replaceable attributes (e.g., flavor) made earlier leading to greater overall purchases and variety (Nowlis et al., 2010). (Ardianti & Widiartanto, 2019) examine the influence of online consumer ratings on purchasing decisions in the context of the Shopee marketplace. The research discovers that online consumer reviews have a substantial positive impact on buying decisions, contributing 16.1% to the decision-making process. This indicates that the presence of reviews, regardless of their quantity, perform a crucial task in shaping consumer behavior. However, the study does not explicitly differentiate the impact of the quantity of reviews from their presence. The results indicate that consumers view supplies with a larger number of reviews as being more dependable and credible, leading to a positive influence on their decision-making in online marketplaces. Therefore, this study puts forward the hypothesis that:

H1: The review quantity has a positive impact on the customer decision in e-marketplaces.

2.3 Review consistency and customer decision

Online reviews significantly influence customer decision-making in the digital economy. Review consistency, both globally and sequentially, positively affects perceived quality, confirmation of expectations, and trust in sellers, ultimately impacting purchase intentions (Li et al., 2024). The consistency of reviews, based on volume, length, and content, play crucial roles in determining review quality and influencing purchase decisions (Kargozari et al., 2023). Rating consistency can enhance recommendation performance by selecting representative consumers as neighbors in collaborative filtering algorithms (J. Park et al., 2023). The heuristic-systematic model explains how both systematic factors "argument quality" and "heuristic factors (source credibility and perceived quantity)" of online reviews directly influence purchase intentions, with heuristic factors also positively influencing argument strength (K. Z. K. Zhang et al., 2014). These findings underscore the importance of review consistency in fostering a perception of authenticity, resulting a better attraction of new customers; hence, hypothesis 2 has been suggested:

H2: Review consistency positively impacts customer decision in e-marketplaces.

2.4 Reviewers' expertise and customer decision

Previous research indicates that reviews written by experts and experienced reviewers have a greater impact on consumer opinions and beliefs. (Vermeulen & Seegers, 2009) done a study to analyze the influence of online hotel ratings on consumer picks. The study examined variables such as the sentiment of reviews, the level of familiarity with the hotel, and the expertise of the reviewer. The findings indicated that reading online reviews increases the possibility of consumers considering a hotel, with reviewer expertise being one of the independent factors. (Aditya & Alversia, 2019) also explored the impact of online reviews on customer purchase intent. The research focused on the impact of online ratings on a review website platform in the context of picking the first visited cafe. The research highlighted that customer decision-making is influenced by many aspects, including rating platforms, other customer reviews, and property features, alongside the consumer's profile as such. In the realm of online reviews, (Ward, 2016) discussed the rise of predatory publishing, where reviews publish articles with hardly any peer review. These journals generally exaggerate their editorial expertise and try to attract writers by promising quick editorial procedures. This highlights the importance of reviewer expertise in ensuring the credibility and reliability of online ratings. Overall, the expertise of reviewers carry a significant role in influencing consumers decisions. (Vermeulen & Seegers, 2009) and (Aditya & Alversia, 2019) emphasize the impact of reviewer expertise on consumer behavior. Ensuring that reviewers are knowledgeable and credible can enhance the trust and reliability of online reviews, ultimately impacting customer decision-making processes. Therefore, this study has put out the third hypothesis in the following manner:

H3: Reviewer expertise has a positive impact on a customer decision in e-marketplaces.

2.5 The product rating and customer decision

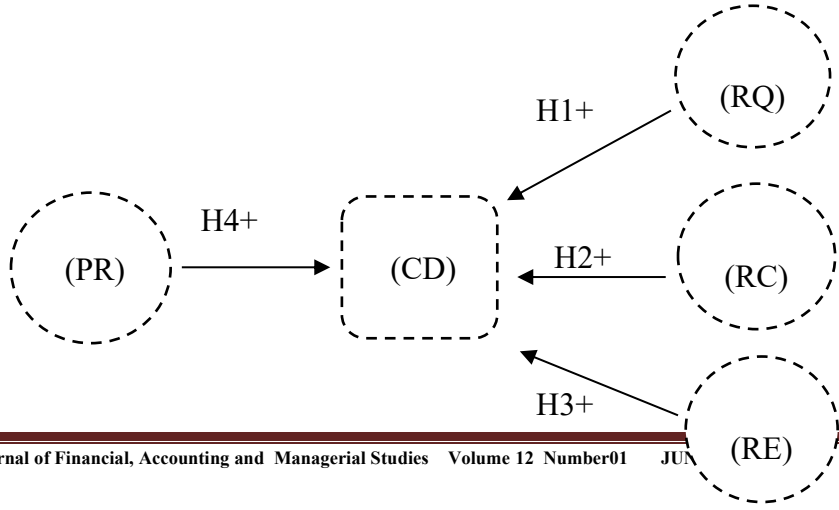
The influence of product ratings on customer decision-making has been a topic of relevance in various researches related to e-commerce and online platforms. (Kim & Srivastava, 2007) highlighted the importance of social effect in online commerce decision-making, emphasizing the potential

benefits for companies in leveraging social interactions to improve customer relationship management and increase sales. (Agustina & Kurniawan, 2018) discussed the part of online ratings in the decision-making process, emphasizing their influence on a buyer's decisions. Furthermore, (Deshpande & Pendem, 2020) focused on the connection between logistics output, ratings, and consumer purchasing behavior in online commerce platforms, highlighting the importance of delivery performance and logistics ratings in influencing sales. (Yoon et al., 2013) examined the moderating impact of customer product knowledge and online buying experience on customer loyalty when utilizing recommendation agents, providing insights into the factors that influence customer decisions. Additionally, (Hult et al., 2019) addressed the differences in antecedents and consequences of customer satisfaction across online and offline purchases, offering guidance to retailers on enhancing customer fidelity in both channels. Overall, the literature suggests that product ratings carry a major role in influencing customer decision-making in e-commerce and online platforms. grasping the impact of social influence, online reviews, logistics performance, and customer knowledge can help companies improve customer relationship management, increase sales, and enhance the overall customer experience. This research suggests the next hypothesis as the fourth one:

H4: The product rating positively impacts customer decision in e-marketplaces.

The above literature review can be summarized in the subsequent research model

Figure 1. Research model



3. Methodology

3.1 Measures

For data gathering in this paper, a structured questionnaire was utilized. Through an examination of the theoretical frameworks around the ideas of review quantity, review consistency, reviewers expertise, and product rating, as well as previous studies examining their relation with customer decision, the concepts mentioned were outlined by five constructs, each one of them assessed by multiple items on a five-point Likert scale (Likert, 1932), where (1) meant that the respondent strongly disagrees with a certain statement, and (5) meant that they strongly agree with the statement. Furthermore, demographic inquiries will be incorporated to gather pertinent participant information, including age, gender, and online shopping patterns. The five constructs mentioned above are represented in table 1:

Table 1. Constructs and the number of items

Construct	Variables	Items	References
Review quantity	RQ1-RQ4	4	(Ardianti & Widiartanto, 2019; D.-H. Park et al., 2007; Vrânceanu, 2017)
Review consistency	RC1-RC4	4	(Kargozari et al., 2023; Li et al., 2024; K. Z. K. Zhang et al., 2014)
Reviewers' expertise	RE1-RE4	4	(Aditya & Alversia, 2019; Vermeulen & Seegers, 2009; Ward, 2016)
Product rating	PR1-PR4	4	(Agustina & Kurniawan, 2018; Deshpande & Pendem, 2020; Yoon et al., 2013)
Customer decision	CD1-CD4	4	(Chen, 2009; Colgate et al., 2007; H. Zhang et al., 2018)

Source: compiled by authors

To prevent the common issue of method variance, the scale was designed with anonymity in mind, limited the number of questions, and allowed respondents ample time to complete it. Additionally, the scale was

revised to clarify any confusing expressions.

3.2 Sample

The study was established on a survey-based questionnaire to explore the influence of rating dimensions on customer decision in e-marketplaces in Oum El Bouaghi-Algeria-. The survey is conducted online to gather informations from a wide range of respondents in a convenient and efficient manner. A purposive sampling method is employed to recruit respondents with varying buying habits and tiers of online experience. The questionnaire was distributed to 154 individuals who conducted transactions on e-markets in the last three months. After 2 months period, 61 responses were considered eligible for analysis after the screening process. The next table represents the descriptive statistics for the respondents:

Table 2. Sample description

Characteristics		Frequency (n)	Percentage (%)
Gender	Male	34	55.7
	Female	27	44.3
Age	<30	28	45.9
	30-50	22	36.1
	>50	11	18
Shopping frequency	Daily	2	3.3
	Weekly	15	24.6
	Monthly	33	54.1
	Rarely	11	18

Source: compiled by authors using SPSS 27 (IBM Corp, 2020)

3.3 Data analysis

To analyze data collected, SPSS 27 software (IBM Corp, 2020) was utilized to assess the normality of data distribution through "the skewness and kurtosis" tests, also, the study utilized "partial least squares-structural equation modeling (PLS-SEM)", a 2nd generation multivariate data analysis technique. "PLS-SEM" is employed to analyze the structural model for the sake of explaining the variance in dependent variables. It is commonly utilized in exploratory studies to generate new views (Hair et al., 2022). Within this study, the survey responses will undergo meticulous data analysis using "the SmartPls 4" software (Ringle et al., 2024). This method was utilized to evaluate the reliability and validity of the measurement model, as well as to assess the proposed connections amongst constructs in the

structural model.

4. Results

4.1 Normality of distribution

The "skewness" and "kurtosis" of each construct were examined to evaluate the normality of data distribution. The skewness values ranged from -0.503 to 0.443, and the kurtosis values from -1.111 to -0.117. According to (George & Mallery, 2016; West et al., 1995), these values fall within the passable range for a normal distribution, indicating that the data does not significantly deviate from normality. Table 3 presents skewness and kurtosis values, plus some descriptive statistics for all measurement items using (IBM Corp, 2020) software.

Table 3. Mean, standard deviation, skewness, and kurtosis values of the study items

	Valid (n)	Missing	Mean	Std. Deviation	Skewness	Kurtosis
RQ1	61	0	3.328	1.004	-0.110	-0.832
RQ2	61	0	3.492	0.986	-0.503	-0.117
RQ3	61	0	2.852	1.038	0.034	-0.946
RQ4	61	0	3.016	1.016	-0.322	-0.277
RC1	61	0	3.279	1.103	-0.205	-0.820
RC2	61	0	3.033	0.975	-0.067	-0.585
RC3	61	0	3.197	1.099	-0.329	-0.573
RC4	61	0	2.492	1.096	0.443	-0.413
RE1	61	0	3.328	1.264	-0.150	-1.033
RE2	61	0	2.984	1.063	-0.134	-0.533
RE3	61	0	3.475	1.080	-0.495	-0.385
RE4	61	0	3.197	1.068	0.006	-0.594
PR1	61	0	3.557	1.094	-0.497	-0.320
PR2	61	0	3.525	0.985	-0.176	-0.535
PR3	61	0	2.902	1.067	-0.048	-1.111
PR4	61	0	2.967	0.940	0.431	-0.502
CD1	61	0	2.787	0.852	-0.221	-0.584
CD2	61	0	2.787	1.042	0.088	-0.860
CD3	61	0	3.033	0.975	-0.067	-0.585
CD4	61	0	2.967	1.130	-0.144	-0.886

Source : by authors using SPSS 27 (IBM Corp, 2020)

4.2 Measurement model assessment

In assessing the measurement model, we took into account convergent validity, internal reliability, and composite reliability. Table 4 shows that all quality criteria were established for this model, as indicated by "factor

loadings", "Cronbach's alpha", "composite reliability (CR)", and "average variance extracted (AVE)" values all exceeding the advised cut-off of 0.7, 0.7, 0.7, and 0.5, accordingly.

*Note that the items (RC4), (PR1), (PR4), (CD3), and (CD4) have been kept despite them not meeting the quality criteria of (0.7) in terms of the factor loadings, that is because as outlined by (Hair et al., 2022): if a "factor loading" is amid (0.5 and 0.7), the item should be perceived for removal only if it enhances the overall quality criteria of the model. In this case removing the mentioned items negatively affected the model's quality criteria, so the items have been kept for further analysis.

Table 4. Measurement model assessment -convergent validity and reliability-

Constructs	Items	Loadings	Cronbach's α	CR		AVE
				Rho_a	Rho_c	
Review quantity	RQ1	0.826	0.820	0.823	0.881	0.648
	RQ2	0.803				
	RQ3	0.786				
	RQ4	0.805				
Review consistency	RC1	0.814	0.781	0.785	0.861	0.609
	RC2	0.817				
	RC3	0.837				
	RC4*	0.638				
Reviewers' expertise	RE1	0.832	0.838	0.848	0.891	0.671
	RE2	0.837				
	RE3	0.817				
	RE4	0.791				
Product rating	PR1*	0.618	0.738	0.765	0.833	0.558
	PR2	0.842				
	PR3	0.808				
	PR4*	0.698				
Customer decision	CD1	0.835	0.704	0.769	0.814	0.532
	CD2	0.869				
	CD3*	0.615				
	CD4*	0.546				

Source: by authors using SmartPls 4 (Ringle et al., 2024)

The evaluation of discriminant validity is now universally acknowledged as an essential measure in inspecting the interrelationships among reflectively measured constructs. Its purpose is to confirm that a reflective construct shows higher associations with its own indicators contrary to those of any other construct in the PLS model (Hair et al., 2022).

Common ways to assess a model's discriminant validity are "the Fornell-Larcker criterion", the analysis of "cross loadings", but according to (Henseler et al., 2015) as showed in their Monte Carlo simulation research: that the current approaches are not consistently effective in detecting issues with discriminant validity in typical research scenarios. As a result, they suggest using an alternative method built on "the multitrait-multimethod matrix" called the "Heterotrait-Monotrait ratio of correlations (HTMT+)" (Ringle et al., 2023) to evaluate "discriminant validity". As disclosed by (Ringle et al., 2023), If the HTMT value is under 0.9, discriminant validity has been founded. The results in table 5 indicates that discriminant validity is established.

Table 5. Discriminant validity results using HTMT matrix

	Customer decision	**Product rating**	**Review consistency**	**Review quality**	**Reviewers' expertise**
Customer decision					
Product rating	0.826				
Review consistency	0.693	0.823			
Review quality	0.640	0.744	0.815		
Reviewers' expertise	0.684	0.571	0.653	0.647	

Source: by authors using SmartPls 4 (Ringle et al., 2024)

4.3 Structural model assessment

Once the normality of data distribution was examined, and the measurement model met the fundamental quality criteria, the analysis of the structural model proceeded with a focus on collinearity diagnostics using variance inflation factors (VIF) which need to be smaller than 5 according to (Hair et al., 2022), "coefficients of determination (R^2)", "the effect size (f^2)", and "relevance and significance of the model paths (β values)". Results and hypotheses testing are exhibited in table 6, 7, and image 1.

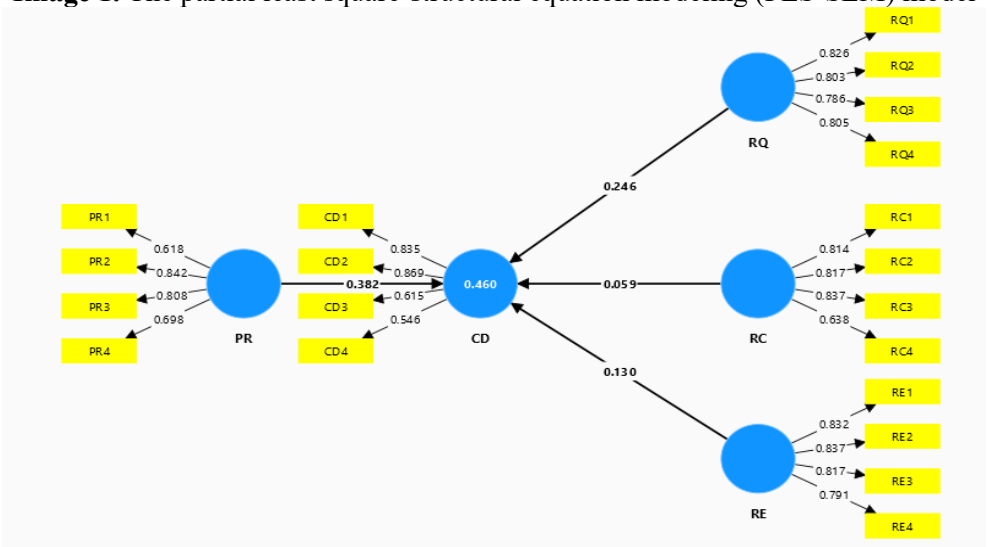
Table 6. Collinearity diagnostic using variance inflation factors (VIF)

Items	**VIF values**
CD1	2.008
CD2	2.096
CD3	1.315
CD4	1.259
PR1	1.383

PR2	1.888
PR3	1.568
PR4	1.234
RC1	1.683
RC2	2.128
RC3	2.152
RC4	1.224
RE1	1.800
RE2	1.879
RE3	2.001
RE4	1.665
RQ1	1.841
RQ2	1.624
RQ3	1.732
RQ4	1.669

Source: by authors using SmartPls 4 (Ringle et al., 2024)

Image 1. The partial least square-structural equation modeling (PLS-SEM) model



Source: SmartPls 4 outputs (Ringle et al., 2024)

The R squared (R2) coefficient of endogenous component was calculated to determine the predictive value of the structural model. As seen in image 1, all of the review independent variables (Review quantity, Review consistency, Reviewer's expertise, Product rating) were able to explain a respectable percentage of 46% of the variance in customer decision (R^2_{CD}=0.460), which is considered a moderate value according to (Hair et al., 2022). In terms of the effect size (f^2), according to (Cohen, 1988) values (</=0.02, </=0.15, >/=0.35) indicate a small, medium, and significant effects, accordingly. Results show a small impact of review consistency (RC) (f^2=0.002) on customer decision, and a medium effect of product rating (PR)

(f^2=0.128), review quantity (RQ) (f^2=0.074), and reviewer's expertise (RE) (f^2=0.016) on customer decision (CD).

Table 7. Hypotheses testing

Hypotheses	Relationship	Std. Beta	Std. Error	t-value	p-value	Decision	Effect size (f^2)
H1	RQ -> CD	0.246	0.148	1.661	0.097	Not accepted	0.074
H2	RC -> CD	0.059	0.160	0.367	0.714	Not accepted	0.002
H3	RE -> CD	0.130	0.191	0.648	0.494	Not accepted	0.016
H4	PR -> CD	0.382	0.155	2.460*	0.014	Accepted*	0.128

*p<0.05. RQ-Review quantity, RC-Review consistency, RE-Reviewer's expertise, PR-Product rating, CD-Customer decision. Source: by authors using SmartPls 4 (Ringle et al., 2024)

As represented in table 7, the relevance of all the direct impacts were evaluated within the structural model, reviewing "path coefficients (Std Beta)", "t-values", and "p-values" computed through a bootstrapping procedure with a two-tailed 5000 resamples. Review quantity (RQ) had a direct positive effect on customer decision (CD) (β=0.246) but not a significant one (p=0.097) at (p<0.05), thus H1 has to be rejected. Review consistency (RC) had a positive small effect on customer decision (CD) (β=0.059) but not a significant one (p=0.714) at (p<0.05), thus not supporting H2. The same pattern was found in the relationship between reviewer's expertise (RE) and customer decision (CD) with a (β=0.130) but at a (p) value of (0.494), this result does not support the acceptance of H3. However, a different pattern was found in the relationship between product rating (PR) and customer decision (CD) with a positive direct effect (β=0.382) and statistically significant at p<0.05 (p=0.014), thus this data support H4.

5. Discussion

The paper created a research model that depicted the influence of review dimensions on customer decision-making process in e-marketplaces via the "Partial-least squares structural equation modeling method (PLS-SEM)". The findings indicate that one out of the four research hypotheses was accepted through data analysis. The supported hypothesis referred to the positive impact of product rating (PR) on customer decision (CD).

The acceptance of the fourth hypothesis that is accepted by the data exhibits that the review of a product/service shown in a firm's website or marketplace positively influences a customer decision. This result strengthens the idea presented by (Agustina & Kurniawan, 2018; Deshpande & Pendem,

2020; Hult et al., 2019) that Understanding the impact of social influence, online reviews, logistics performance, and customer knowledge can help companies improve customer relationship management, quality perception, increase sales, and enhance the overall customer experience and positively impacting buyer's decisions.

The research fails to establish a significant positive effect of (RQ), (RC), and (RE) on (CD), which means the rejection of the first, second, and third hypotheses. These results contradict the studies that found that review quantity (Ardianti & Widiartanto, 2019; Maslowska et al., 2017; J. Park et al., 2023; Vrânceanu, 2017), review consistency (Kargozari et al., 2023; Li et al., 2024; D.-H. Park et al., 2007; H. Zhang et al., 2018), reviewers' expertise (Aditya & Alversia, 2019; Vermeulen & Seegers, 2009; Ward, 2016) have positive effects on customer decision-making process. This could be due to the mentality of the Algerian individual, which might be distinct from those in more evolved countries, and more accustomed to using technology and internet in their purchases.

The study has theoretical and practical implications also. From a theoretical perspective, this research presents a theorized model that connects review dimensions with customer decision-making process in an under-developed nation like Algeria, as there are many studies on review and rating dimensions' impact on customer decision, but not in a north-African country. From a practical outlook, the findings can be of interest to up and coming or established, local or foreign businesses who want to invest in Algeria, as this paper showcases that the Algerian individual is influenced more by a product/service rating in e-marketplaces or webpages, which can affect his decision in choosing a product/service of certain brands.

6. Conclusion

Customer decision is influenced by many factors, the most important of them are known as review dimensions. Many studies have tried to find what affects an individual decision-making process whether be it literature reviews or empirical studies. This paper tried to identify the relationships between review dimensions and customer decision by suggesting a research model of five latent variables based on past literature utilizing a structured questionnaire. The data is analyzed via SPSS 27 (IBM Corp, 2020), and SmartPLS 4 (Ringle et al., 2024).

We found that product rating (PR) has a significant positive effect (β=0.382, $p<0.05$) on customer decision (CD), this underscores the importance of product/service rating, review in influencing customer decision and experience in e-marketplaces. We also found direct positive effects but not significant ones of review quantity (RQ), review consistency (RC), reviewers' expertise (RE) on customer decision (CD). This indicates that the Algeria individual is not very interested in aforementioned dimensions when making his decision regarding choosing certain brands.

The findings of this paper have theoretical and practical implications as displayed above in the discussion section. However, certain constraints should be considered. One constraint is the lack of additional alike studies on this topic in an African country, which hinders our ability to cross-check results with those from similar contexts. The other limitation would be that the data was gathered via a single survey, and the sample was small due to the low number of respondents, plus the sample was restricted to one city in Algeria (Oum El Bouaghi).

As suggestions to future studies on this topic, it might be beneficial to conduct the research in multiple cities, increase the sample size, and identifying other elements and dimensions related to review and rating that could have positive or negative influence on customer decision in e-marketplaces to better understand consumer behaviors, motives, and perception.

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