

The Impact of Initial Formation Pathway on Customer Engagement and Repeat Purchase

Ghaith Abdulridha Mubdir¹ , Sharizal Hashim^{2*} , Abu Hanifah Ayob³ , Nadzirah Rosli⁴ 

¹ Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Bangi, Malaysia, Faculty of Administration and Economics, University of Thi-Qar, Thi-Qar, IRAQ; Email: P104676@siswa.ukm.edu.my

² Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Bangi, MALAYSIA

³ Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Bangi, MALAYSIA; Email: abuhanifah.ayob@ukm.edu.my

⁴ Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Bangi, MALAYSIA; Email: nadzirah.rosli@ukm.edu.my

*Corresponding Author: hsharizal@ukm.edu.my

Citation: Mubdir, G. A., Hashim, S. Ayob, A. H. and Roshi, N, (2025). The Impact of Initial Formation Pathway on Customer Engagement and Repeat Purchase, *Journal of Cultural Analysis and Social Change*, 10(2), 4070-4082. <https://doi.org/10.64753/jcasc.v10i2.2233>

Published: November 22, 2025

ABSTRACT

This study examines Iraq's social commerce platform to see how initial formation pathway affect customer engagement and repeat purchase behaviour in social commerce. Grounded on social exchange theory (SET) and Stimulus-Organism-Response (SOR) theory, this study uses a mediated model to analyse how customer engagement turns initial formation pathway into consumer customer engagement and repeat purchase behaviour. The data was collected from 471 online customers in Iraq and analysed using Smart PLS. Results show that initial formation pathway has a positive impact on customer engagement and repeat purchase. Customer engagement affected positively the repeat purchase and mediated the effect of initial formation pathway on repeat purchase. The study contributed to theory by integrating SET and SOR. SET explained the cost-benefit analysis while SOR explained the behavioural mechanism linking initial stimuli to repeat purchase. This study integrates these theories into a coherent framework while acknowledging Iraq's geographic restrictions, improving social commerce literature. The findings can help firms improve engagement tactics through trust-building. This study improves understanding of digital customer engagement tactics in emerging regions and suggests cross-cultural applicability and technology engagement enhancements.

Keywords: Customer Engagement, Repeat Purchase, Social Commerce, Initial Formation Pathway, Iraq

INTRODUCTION

S-commerce, which combines social media (SM) and e-commerce, has changed shopping worldwide (Ali et al., 2024). S-commerce uses SM networks for e-commerce. It involves using SM platforms to find, research, and buy products and facilitate social interactions, suggestions, and user-generated content (Lin et al., 2019). S-commerce, which began in the early 2010s, involves companies selling products on SM applications and website (Attar et al., 2022). The confluence of SM and e-commerce platforms, increased consumer time on SM, and the COVID-19 pandemic encouraging online shopping have driven its rise (Hruska & Maresova, 2020). Sales through S-commerce rose to \$992 billion in 2022 and expected to reach \$8,500 billion by 2030 (Statista, 2024). Social proof and user-generated content can boost sales in s-commerce when users share feedback and experiences on SM platforms (Dwivedi & McDonald, 2020). However, maintaining an active SM presence and building client trust are challenges (Malesev & Cherry, 2021). S-commerce allows firms to communicate and increase customer

engagement despite these limits. Companies need customer engagement because it boosts performance and marketing (Marolt et al., 2020; Karamdsani et al., 2025). It also influenced consumer behaviour, which increased business sales, word of mouth, and repeat purchases. Customer engagement may increase customer loyalty (Ahmad et al., 2022; Sallaku & Vigolo, 2022) and product/service satisfaction (Jessen et al., 2020). Thus, customer engagement is “a consumer’s behavioural manifestations that have a brand or firm focus, beyond purchase, coming from motivating drivers” (Sallaku & Vigolo, 2022).

Because customer engagement is important, companies and scholars have studied it to better manage customers and boost revenues. Meta-analysis (Barari et al., 2021) divides customer engagement into two paths. Companies use the promoted path to increase customer engagement (Barari et al., 2021). The organic pathway promotes customer contact through consumer-driven activities such as perceived value and perceived service quality (Barari et al., 2021). The promoted pathway uses incentives, prizes, discounts, and bouncing to attract customers (Harmeling et al., 2017). Therefore, promoted pathway focuses on incentives while organic pathway focuses on developing customer relationship. However, researchers did not account for the pre-relationship among the customers and companies. The first impression as well as the reputation of companies along with the credibility of information has been examined in limited studies (Mubdir et al., 2024, 2025). Customer engagement depends on initial formation (Gouji et al., 2016). This includes customers' knowledge of companies' reputations, the integrity of their information, and their response. Reputation, information credibility, and responsiveness are crucial to client acquisition (Gouji et al., 2016). Initial formation pathway begins with responsiveness. Interactive S-commerce speeds up information flow and engagement between buyers, merchants, and companies in retailing (Attar et al., 2022), improving online customer experience and service quality (Palese & Usai, 2018). S-commerce enables stores respond faster to customer inquiries. When merchants respond quickly and show care, customers are happier (Nazir et al., 2023; Palese & Usai, 2018).

Information credibility which refers to the public's confidence in an organization's information, is another component of initial formation (Galib et al., 2023). Information credibility improves customer engagement, decision-making, and purchase intention (Connolly et al., 2023; P. Wang & Huang, 2022). Firm reputation is the third initial formation component. Customers' service ratings determine a company's reputation (Hess Jr, 2008). Research indicates that it significantly affects customer behaviour, loyalty, and corporate reputation (Fatmawati & Fauzan, 2021). Company reputation affects consumer trust, loyalty, and purchase intentions, enhancing brand credibility and trustworthiness (Qalati et al., 2021). Customer engagement might be cognitive, emotional, or behavioural (Bazi et al., 2023; Aji et al., 2025). This research is motivated by several gaps in the literature. Prior studies showed conflicting results on how customer engagement derives repeat purchases (Barari et al., 2021; Blut et al., 2023). In addition, most research focuses on western markets neglecting unique barriers in regions like Iraq, where low digital adoption and fraud concerns persists (Raheem Naeem Naeem, 2022; Statista, 2021) and this issues persists in other developing nations due to technology adoption challenges (Chen et al. 2021; Do et al. 2023). Furthermore, while prior literature examines organic and promoted engagement pathway, the initial formation pathway remains overlooked despite its role in mitigating early-stage distrust (Gouji et al., 2016). Due to the increase shift toward online purchase, retailers must understand how to manage online customer and increase their engagement and repeat purchase. The objective of this study is to examine the effect of initial formation pathway on customer engagement and repeat purchase and to examine the direct and mediating role of customer engagement between initial formation pathway and repeat purchase. The study responds to the call of Srivastava and Sivaramakrishnan (2022) to explore S-commerce customer engagement predictors as SM may boost engagement. This research explores Iraqi s-commerce customer engagement, including repeat purchase. Next section discusses the literature review followed by research methodology, findings, discussion, and conclusion.

LITERATURE REVIEW

Theoretical Framework

This study uses social exchange theory (SET) and stimulus-organism-response (SOR) to evaluate how initial formation pathway influences customer engagement and repeat purchases in Iraq's s-commerce environment. These theories describe rational computations and psychological dynamics in digital market customer-brand interactions. The theories provide a full S-commerce paradigm for Iraq's socio-economic and cultural context (Calhoun & McCarthy, 2023). SET which depends on cost-benefit analysis informs customer engagement decisions (Lioukas & Reuer, 2015). SET argues humans create relationships when advantages outweigh costs (Cook et al., 2013). Reduced ambiguity shows how good first experiences may lead to continued engagement, as customers who perceive positive cost-benefit ratios in early transactions are more inclined to use the platform (Di Ruscio, 2021). The SOR describes how psychological systems turn environmental stimuli into behaviour. SOR

theory asserts that external stimuli (S) drive interior cognitive, emotional, and behavioural states (O) to create a response (Tan et al., 2019). According to this study, initial formation pathway (S) is expected to affect S-commerce customers' engagement (O) which in turn will affect repeat purchase (R). Therefore, this study uses the SET to explain the general transaction that leads to customer engagement and repeat purchase while the SOR describes the process through which the initial formation pathway affects customer engagement which in turn affects repeat purchase.

Online Repeat Purchase in Iraq

Since the digital revolution, e-commerce and s-commerce dominate retail. Iraq's s-commerce business is growing due to internet penetration (78.7% in 2024), smartphone use, and changing customer preferences (Mohamed et al., 2023). Iraqi online repeat purchases are growing for several reasons. Digital platforms allow customers to buy more things anytime, anywhere. Online shoppers are more confident due to secure payment and delivery procedures (Zaidan & Raju, 2021). However, several issues are still prevalent in Iraqi context. Logistics issues such as delivery delays and restricted service coverage raise consumer worries regarding product legitimacy, delivery dependability, and payment security (Naeem 2022).

Customer engagement fosters repeat purchases in Iraq's growing online retail economy. Engaging SM marketing, personalised messages, and user-friendly mobile applications build consumer loyalty (Al Sukaini, 2022; Rashid & Rokade, 2021). Iraqis consider price, authenticity, and shopping experience before buying (Al-Refiay et al., 2022). Repeat customers desire high quality product with reasonable price and secure payment method (ALmasoodi et al., 2023; Behera et al., 2024). Retail environments in Iraq are critical for consumer behaviour. Despite 31.95 million SM users in 2024, internet purchasing lags globally. A total of 12.4% of Iraqi internet users buy biannually, 47% never bought product online (Statista, 2021; Putridinanti et al., 2025). Nearly 90% of industrialized internet users purchase online (Tahir & Arije, 2021). Therefore, this study investigates the effect of initial formation in encouraging online customer to engage in online purchase.

Customer Engagement

Customer engagement is a new concept in marketing. Early research in customer engagement can be traced back to 2005 and increased after 2010. Engagement is a brand-consumer emotional bond. Due to the importance of customer engagement, companies place high interest in this variable because engaged customer repeatedly purchase, refers others and recommended the brand to other customers as well as stay loyal to the brand (Nyadzayo et al., 2020). Client relationships have replaced transactions and one-way communication in marketing. Mobile and social media have changed how customers connect with companies and each other (Naimi-Sadigh et al., 2022; Ambag et al., 2024; Abbas et al., 2024).

Service and pleasure sparked customer engagement. In saturated, competitive marketplaces, companies seek distinction beyond product and price (Hoyer et al., 2020). It emphasized emotional and psychological client ties. Customers gave input online and on social media, pushing this transition (Bala & Verma, 2018). Customer engagement may influence brand impression and relationships (Mariani & Nambisan, 2021). Customer engagement emphasizes brand-customer co-creation. This dynamic, iterative process encompasses cognition, emotions, and behaviour. Businesses engage customers with relevant content, tailored experiences, and brand storytelling on social media, mobile apps, and online communities (Nadeem et al., 2021; Naimi-Sadigh et al., 2022; Savila et al., 2025).

In customer oriented enterprise, companies prefer trust, loyalty, and value above transactions (Pardo-Jaramillo et al., 2020). Customer lifetime value and sustainable corporate growth increase when engaged customers become brand ambassadors (Sapienza, 2020). Companies may personalise interactions and services by collecting, analysing, and using massive volumes of client data (Mariani & Wamba, 2020). Companies may increase customer experience and engagement by leveraging data to recommend, inform, and promote (Kitchens et al., 2018).

As customer engagement has grown, businesses have used chatbots, virtual assistants, augmented reality (AR), and gamification. These technologies can help companies create immersive, engaging experiences that attract customers, simplify self-service, and build emotional brand bonds (Riar et al., 2023). Despite technological advances, clients seldom interact with enterprises, commodities, and services (Chelpanova, 2023). Theodora and Napitupulu (2023) found low customer engagement lowers sales. Proactive, customer-centric customer engagement uses technology, data, and new methods to build meaningful, mutually beneficial relationships between customers and businesses in today's competitive market. Therefore, this study examines customer engagement.

Conceptual Framework

The conceptual framework of this study integrates the SET and SOR to explain how initial formation pathway can affect the customer engagement and repeat purchase and how customer engagement can affect the repeat

purchase and mediate the effect of initial formation pathway on repeat purchase. The framework in Figure 1 addresses an important gap in the literature by introducing the initial formation pathway as a predictor of customer engagement and repeat purchase unlike previous studies which focused on the organic and promoted pathway (Barari et al., 2021). The framework also deals with a developing countries context where studies are still limited (Statista, 2021). Further, introducing the engagement with multidimensional approach can capture the different aspect of engagement. Furthermore, examining the engagement as direct and mediating variable can explain the relationship between initial formation pathway and repeat purchase. Figure 1 shows the conceptual framework of this study.

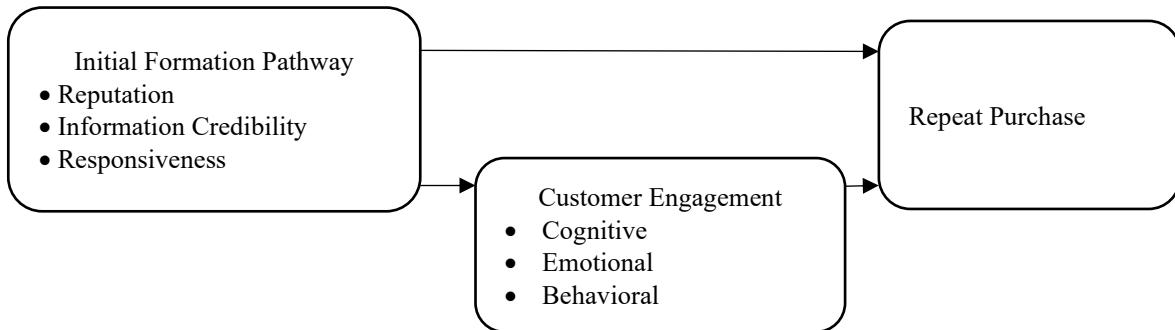


Figure 1. Conceptual Framework

Initial Formatted Pathway, Customer Engagement and Repeat Purchase

The initial formation pathway includes the firms' reputation, which encourages newcomers to interact and deal with them online, as well as their credibility of information and the responsiveness. Customers' impressions of a firm's caring for their needs and wants can determine the reputation of the firm (Hess Jr, 2008). Customer behaviour of repeat purchase depends on company reputation. (Qalati et al., 2021) discovered that business reputation influences consumer trust, loyalty, and purchase intentions. A strong brand reputation increases reliability and trustworthiness, leading to increased customer engagement (Stravinskienė et al., 2021; Ahmed et al., 2023). Recent research has studied how consumer engagement influences repeat purchase. (Hollebeek & Macky, 2019; Prasetyo et al., 2025) pointed out that business reputation boosts customer engagement and repeat purchases.

Information credibility is how much the public trusts the organization's public information. Credibility improves customer engagement in communication, decision-making, and purchase intention (Galib et al., 2023). Trustworthiness of a corporation and its products and services depends on information credibility. Falsifying product or service facts can damage trust and promote poor company reputation. Therefore, researchers indicated that early consumer engagement and repeat purchases depend on information credibility (Onofrei et al., 2022). Credible information influences early client perceptions of a firm or its products (Jamal et al., 2021). Credible information about the firm and its products fosters trust (Schweiger & Cress, 2019; Nizar, 2022).

Customer responsiveness indicates how seriously merchants consider customer criticism and how long they take to reply (Lim et al., 2020). Interactive S-commerce enables shoppers and merchants instantly share information and communicate with one other and businesses (Attar et al., 2022). Quick merchant responses boost customer engagement and satisfaction (Nazir et al., 2023). Sellers swiftly address consumer problems, improving service quality (Palese & Usai, 2018). Ahmad et al. (2022) and Connolly et al. (2023) indicated that responsiveness helps online sellers to learn about the company and experience the services. Answering consumer inquiries on companies' social media apps and delivering real-time information improves customer perception and engagement with online vendors (Connolly et al., 2023; Rajagopal et al., 2024).

This hypothesis is grounded in SET, which posits that customers will invest time and engagement when they perceive sufficient benefits from the platform. In the s-commerce context, reputation is established through visible social proof like platform ratings and user testimonials, information credibility is assessed through authentic user-generated content and influencer endorsements, and responsiveness is evaluated via real-time communication features native to social platforms (Bhutto et al., 2023; Omar Zaki et al., 2024). These elements collectively reduce perceived risk and foster engagement behaviours that are unique to s-commerce environments, such as active participation in comment sections and live shopping events (Rosli et al., 2024; Tan et al., 2025). The operationalization of these constructs specifically accounts for the social dynamics that differentiate s-commerce from traditional e-commerce platforms (Hussain & Ayob, 2023). This study suggests the initial formation pathway boosts customer engagement and repeat purchases.

H1: Initial formation pathway affects positively customer engagement.

H2: Initial formation pathway affects positively repeat purchase.

Customer Engagement and Repeat Purchase

Engagement is key to repeat purchases and other outcomes. Customer engagement improved company finances, word of mouth, and repeat purchases as well as loyalty (Sallaku & Vigolo, 2022). Customer engagement increases customer engagement, which leads to direct purchase, indirect recommendations, influencing others, and feedback (Bilro & Loureiro, 2020; M, P., 2020). Customer engagement boosts business performance, opt-in rates, information sharing, and appropriate marketing. Meta studies showed varied results for customer engagement. Cognitive and emotional customer engagement did not impact behavioural intention, but behavioural engagement did (Blut et al., 2023; Ayub, 2021). However, Barari et al. (2021) revealed that attitudinal and behavioural customer engagement boosts loyalty and business performance. In s-commerce environments, engagement manifests through platform-native actions like following sellers, saving posts, or participating in live shopping events all of which create multiple touchpoints that naturally facilitate repurchases (Tan et al., 2024; Wang & Ayob, 2024). Based on these findings, this study examines how customer engagement affects repeat purchase among Iraqi online customer.

H3: Customer engagement has a positive effect on repeat purchase.

Mediating Role of Customer Engagement

Few research addressed customer engagement as a mediator. Ahmad et al. (2022) revealed that customer engagement mediated the influence of online customer experience on loyalty. Sallaku and Vigolo (2022) explored customer engagement as a mediator. The finding showed that customer engagement mediated authenticity, interaction, and engagement on loyalty. Connolly et al. (2023) discovered that information credibility and community responsiveness increased knowledge adoption but not contribution, mediated via customer engagement. This hypothesis draws from the SOR and proposes that customer engagement mediates the relationship between the initial formation pathway and repeat purchases, where the initial formation components serve as external stimuli that create cognitive, emotional, and behavioural engagement states (the organism), which in turn drive repeat purchase behaviour (the response) (Bhutto et al., 2023; Ferdous et al., 2024; Wenning et al., 2021). In S-commerce, this mediation is particularly salient because engagement behaviours like sharing product posts or participating in live streams create ongoing platform stickiness and social reinforcement that traditional e-commerce lacks (Rosli et al., 2025; Ahmad et al., 2023; Rehman et al., 2024). The social nature of these platforms means that engagement do not just facilitate transactions but builds community relationships that encourage repurchasing, making the mediation effect potentially stronger than in conventional e-commerce contexts (Zhang et al., 2025; Muhammad et al., 2023). Therefore, this study proposes customer engagement as a mediating variable between initial formation pathway and repeat purchase.

H4: Customer engagement mediates the effect of initial formation pathway on repeat purchase.

Research Population

The demographic of this study is Iraqi retail customers. This research examines Iraq's oldest and most popular platform. The platform is prominent MENA online classifieds site, is crucial to Iraq's e-commerce economy. It was founded in 2008, eliminates intermediaries and offers autos, real estate, electronics, home appliances, and fashion product. Its user-friendly design and website and mobile app accessibility have established it Iraq's digital market leader. It is estimated based on data from the website that 900,000 online customers are visiting the website to purchase products. The majority of these respondents are located in Baghdad. Therefore, the study focuses on Baghdad. Due to the lack of contact details of these online users, this research uses purposive sampling. Only users with online banking account and have conducted online purchase are included. Thus, a question at the beginning of the questionnaire was asked to select only those who match the inclusion criteria.

The data was collected using a questionnaire. The measurement of the variables was adopted from previous studies. Initial formation pathway was adopted from (Connolly et al., 2023; Lederman et al., 2014; Nguyen et al., 2021). Customer engagement was adopted from (Patterson et al., 2006). Repeat purchase was adopted from (Phan Tan & Le, 2023). Next, the questionnaire was translated using back-to-back translation and a validation process was conducted by inviting experts to validate the questionnaire. The pilot study was conducted also to ensure that reliability of the measurement. Exploratory factor analysis was conducted to ensure that the questionnaire is ready for further data collection and to remove any weak loading variable. A total of 768 questionnaires were distributed using online channel and network referral. Next section discusses the process of data filtering.

FINDINGS

Data Examination

Hair et al. (2023) recommended data quality assessments before hypothesis testing. These checks ensured the dataset was complete, outlier-free, normally distributed, and multicollinearity-free. Out of 768 invited respondents, 515 (67.0%) gave complete responses and 232 (30.3%) did not reply while 21 responses were considered invalid. Hair et al. (2023) recommended checking missing values using SPSS frequency. Excluded responses had above 15% missing data (23 cases), and those with less than 5% missing values (11 cases) were mean replaced. This method minimized data loss and preserved dataset integrity. Boxplot analysis identified outliers, or extreme data that deviated from the mean. Removing 21 outliers yielded 471 cases for further analysis. Skewness, kurtosis, and histograms determined normality. All variables showed skewness and kurtosis values within the acceptable range (absolute values <1), confirming a normal distribution. Further, histograms had a bell-shaped curve, supporting normality. Tolerance and variance inflation factors assessed multicollinearity. All tolerance values were over 0.20, and VIF values were under 5, indicating no multicollinearity among predictor variables. This confirmed regression variable independence. An independent samples t-test compared early (n=194) and late (n=277) respondents to assess non-response bias. The dataset was unaffected by non-response bias since critical variables did not change ($p > 0.05$).

Profile of the Respondents

The sample was almost equally divided between male (52.4%, n=247) and female (47.6%, n=224) participants. This equitable representation indicates that online buying behaviour is not markedly influenced by gender, since both men and women engage actively in S-commerce. The predominant age group was 26-35 years (31.6%, n=149), closely succeeded by 36-45 years (29.9%, n=141). Collectively, these two categories comprised the majority (61.5%) of the sample, signifying a robust representation of middle-aged consumers. The 18-25 age group included 28.7% (n=135), whilst older demographics (46-55 years and over 55 years) constituted lesser amounts (7.6%, n=36 and 2.1%, n=10, respectively). Overall, 90.2% of respondents were aged between 18 and 45 years, indicating a largely youthful to middle-aged demographic.

A notable percentage of participants possessed a bachelor's degree (49.5%, n=233), while those with a master's degree constituted 22.1% (n=104). Individuals with a diploma or below accounted for 17.4% (n=82), whilst PhD holders were the lowest segment at 11.0% (n=52). In all, 82.6% of respondents possessed at least a bachelor's degree, signifying a highly educated population. The predominant group of participants was working in the public sector (56.3%, n=40), followed by students and jobless persons, each comprising 11.3% (n=8). Employees in the private sector constituted 11.3% (n=8) and retired and others each comprised 2.8% (n=2). This distribution emphasizes a significant public sector representation while integrating many job backgrounds.

Measurement Model

The measurement model is evaluated based on five criteria. First the factor loading have to be larger than 0.70 as well as the Cronbach's Alpha (CA) and Composite Reliability (CR). Acceptable values of CA and CR are 0.70. In addition, the validity of the measurement is assessed using the convergent validity and the discriminant validity. The convergent validity is assessed using the Average Variance Extracted (AVE). Acceptable value of AVE is 0.50. For the discriminant validity, the measurement is considered to have a discriminant validity when the indicator loading is larger than all the cross loading. In evaluating the factor loading, one item from initial formation pathway was removed. As can be seen in Table 1, the values of CR, CA, and AVE are above 0.70, 0.70, and 0.50 respectively. Therefore, CR and CA are achieved as well as the convergent validity. In term of the discriminant validity, the value of HTMT's correlation is less than 0.85 indicating that the discriminant validity is achieved.

Table 1: Measurement Model Evaluation

Variable	CA	CR	AVE	CE	IFP	RP
Customer engagement (CE)	0.908	0.909	0.548	-		
Initial Formation Pathway (IFP)	0.936	0.937	0.587	0.741		
Repeat Purchase (RP)	0.856	0.857	0.636	0.741	0.713	-

Structural Model

For evaluating the structural model, researchers agreed that there are four main criteria that includes the R-square (R^2), path coefficient (β), and effect size (F^2) (Hair et al., 2023). As shown in Figure 2, the value of R-square ranged between 0.464 for customer engagement and 0.619 for repeat purchase. This indicates that the initial formation pathway can explain 46.4% in customer engagement while customer engagement and initial formation pathway can explain 61.9% of repeat purchase. For the effect size, the value of F^2 as shown in Table 2 is larger than 0.02 for all paths.

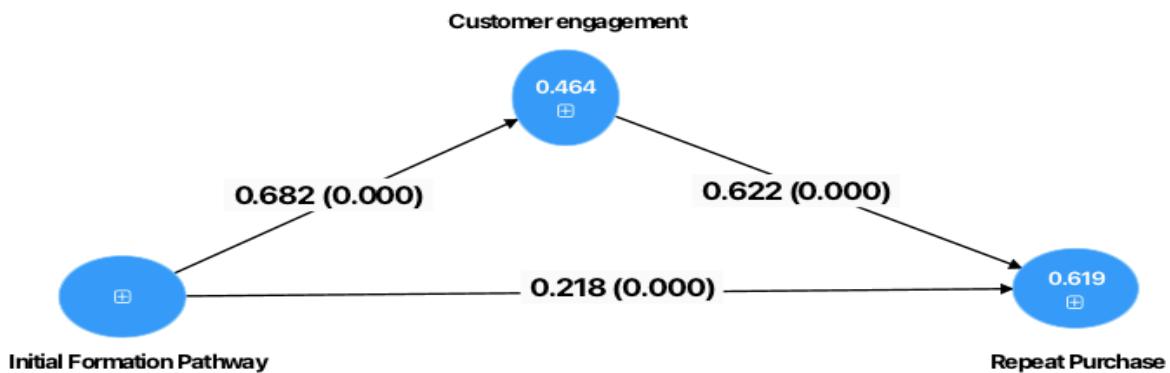


Figure 2 shows the structural model. The figure shows the effect of initial formation pathway on customer engagement and repeat purchase. It shows also the effect of customer engagement on repeat purchase. Further, the figure shows the mediating role of customer engagement between initial formation pathway and repeat purchase. The results of testing the hypotheses are shown in Table 2. It shows the direct and mediation effect.

Table 2: Results of Hypotheses Testing

H	Path	B	Std.	T-values	P values	F ²
H 1	Initial Formation Pathway -> Customer engagement	0.137	0.046	2.96	0.003	0.09
H 2	Initial Formation Pathway -> Repeat Purchase	0.173	0.049	3.515	0.000	0.10
H 3	Customer engagement -> Repeat Purchase	0.622	0.041	15.01	0.000	0.39
H 4	Initial Formation Pathway -> Customer engagement -> Repeat Purchase	0.065	0.023	2.886	0.004	0.03

The analysis confirmed H1 with a strong positive impact of initial formation pathway on repeat purchase ($\beta = 0.137$, $p = 0.003$). This shows that early service development experiences strongly affect user engagement. The relationship is strong since the t-value is 2.96, over the 1.96 threshold. For H2, a substantial direct influence ($\beta = 0.173$, $p < 0.001$) and t-value of 3.515 were observed. The initial formation experience increases repurchase intentions independently of customer engagement, supporting H2. For H3, this path which shows the effect of customer engagement on repeat purchase had the greatest influence ($\beta = 0.622$, $p < 0.001$) and a high t-value of 15.01. The results support H3, showing that engaged customers are more likely to repeat their purchases. For H4, the direct effect of initial formation pathway on repeat purchase is positive while the indirect effect is also positive. The considerable indirect effect ($\beta = 0.065$, $p = 0.004$, t-value = 2.886) supports the partial mediation hypothesis.

DISCUSSION

This study examined the effect of newly emerged variables such as initial formation pathway on customer engagement and repeat purchase. The study also aimed to examine the mediating role of customer engagement. The hypothesis testing showed that early interactions including business reputation, information trustworthiness, and responsiveness influence customer engagement and encourage repeat purchases in Iraq's social commerce environment. These findings support the study's goals and highlight the importance of trust-building in online shopping, where scepticism and fraud concerns are common. Customer distrust owing to counterfeit products and untrustworthy suppliers plagues Iraqi shopping. In this context, company reputation is crucial to overcoming trust issues. According to studies (Qalati et al., 2021; Said et al., 2025; Fitriana, 2022), a good reputation boosts client confidence and encourages repeat business. Consumer perceptions and actions depend on information credibility. Due to extensive deception in Iraq's digital marketplace, accurate product information and clear seller communication influence customer engagement and purchases. This finding supports research (Schweiger & Cress, 2019; Kahil, 2025; Hetiutami, 2022) that exact information builds confidence and reduces risk, boosting repeat transactions.

The findings confirmed that engaged customers are more likely to rebuy again. This supports research showing that customer engagement drives loyalty, word-of-mouth, and company success (Barari et al., 2021; Blut et al., 2023; Putri et al., 2023). Similarly, the customer engagement affected the purchasing behaviour (Jessen et al., 2020; Aslam et al., 2024). In this study, retailers may improve brand loyalty, retention, and profitability by focusing on engagement of customer. This study investigates how customer engagement mediated the effect of initial formation pathway on repeat purchase in Iraq's S-commerce. The findings showed that customer engagement is essential to linking early trust-building events with continued purchase behaviour, despite previous research's limited coverage. Analysis shows that customer engagement partially influences the first formation pathway's effect on repeat purchases. This indicates that while corporate reputation, information credibility, and responsiveness directly affect repeat purchase, much of their impact is through customer engagement. Engagement as a mediator increases R-square values significantly, confirming its explanatory power in this connection. This result is in line with prior literature. Ahmad et al. (2022) experience-loyalty connection findings confirm the initial formation pathway's trust-building components, which increase customer engagement and repurchase intentions. (Connolly et al., 2023; Fatima et al., 2022; Haykal et al., 2022) information credibility study shows how engagement turns favourable perceptions into activity. This mediation effect supports boosting initial trust factors and encouraging continued participation for Iraqi platforms. The partial mediation shows that initially good interactions and their engagement effects enhance customer engagement. This deep understanding enhances academic and practical customer relationship management methods in expanding e-commerce economies.

IMPLICATIONS

This study advances S-commerce customer engagement theory. The research unites previously scattered approaches by evaluating early formation processes. In the early formation pathway, trust-building processes (e.g., reputation, credibility) coincide with social exchange theory. The study innovatively combines SET with the SOR theories to understand engagement dynamics. SET describes trust and perceived advantages as the "why" of consumer reciprocity, whereas SOR describes psychological processes (cognitive, emotional, behavioural). These two integrations overcome theoretical fragmentation and show their complimentary value. Initial formation pathway like reliable information diminishes perceived risks (SET), which induce cognitive trust (SOR) and engagement.

Interpreting these ideas for emerging markets like Iraq, where low digital trust and cultural preferences change engagement patterns, is crucial. Mediation analysis validates its key role in recurrent purchases, expanding engagement literature. Customer engagement affected repeat purchase and mediated partially the effect of initial formation pathway on repeat purchase demonstrating its dual role as a strategic stimulus and loyalty driver. This research supports SET's reciprocity principle and adds complexity to SOR by illustrating how various stimuli activate cognitive and emotional engagement characteristics.

By concentrating on Iraq, the study challenges Western-centric engagement models and fills a vital gap. The research pioneers a repeatable paradigm for developing markets by showing how localized trust-building and hybrid digital-traditional techniques perform in low-trust contexts. This confirms classical theories' applicability and encourages research on cultural variables in digital engagement tactics.

The study provided social commerce retailers with customer engagement and retention tactics. Prioritizing the initial formation pathway is crucial in Iraq, where trust problems hamper online adoption. For risk mitigation, firms should invest in transparent reputation systems including verified seller profiles, clear product information, and prompt customer support. Retailers might use AI-driven chatbots to resolve queries instantly, minimizing early-stage abandonment. Integrated analytics are essential for engagement mediation. To find high-value consumers, firms should measure behavioural engagement indicators like review frequency and session duration alongside transactional data. Retailers might utilize engagement levels to target reactivation tactics like tailored emails for lapsing users.

The research emphasizes hyper-localization in developing markets. Customer support teams may bridge the digital-human touch barrier by learning dialect-specific communication or working with local influencers like Iraqi social media influencers. Secure payment channels and fraud prevention boost initial confidence and engagement. Retailers may turn one-time purchasers into devoted advocates in difficult markets like Iraq by combining these methods with constant engagement tracking.

CONCLUSION

This study was examined the effect of initial formation pathway on customer engagement and repeat purchase with customer engagement proposed as a mediating variable. Initial formation pathway affected significantly the

customer engagement and repeat purchase. In addition, customer engagement affected positively the repeat purchase and mediated the effect of initial formation pathway on repeat purchase. These insights give firms a framework to maximize engagement tactics through trust-building, value creation, and targeted marketing. Three main limitations should be considered in this study. First, its geographic concentration on Baghdad, Iraq, limits its applicability to other places and nations with different socio-economic and technical circumstances. While regional insights are useful for understanding Iraqi customer behaviour, they may not apply to established e-commerce economies. Second, despite the targeted retailers dominate the market in Iraq, the sole focus on it restricts insights on how platform-specific characteristics (e.g., interface design, community tools) impact engagement throughout Iraq's S-commerce ecosystem. Third, purposive sampling limits the generalizability of the findings of this study. As a way forward, four main suggestions for future works can address these limitations. Replicating the study in other Iraqi areas and cross-cultural contexts would test the framework's universality and reveal regional differences and similarities. In addition, conducting comparative research across platforms may show how design and functionality affect interaction paths. Adding competitive dynamics, economic volatility, or regulatory changes would make the model more applicable in volatile markets. Further researchers are also recommended to examine the effect of AI-driven customization, augmented reality and virtual reality experiences, and blockchain-based trust mechanisms in changing engagement methods. Further research is also recommended to examine variables like customer demographics and product categories for segment-specific tactics. Gamified promotions may appeal to younger users, while elderly users value reputation. Methodologically, longitudinal or randomized sampling improves causal inferences and generalizability. Research may enhance the proposed paths into a dynamic, internationally adaptable S-commerce engagement framework by addressing these gaps.

REFERENCES

Ahmad, F., Mustafa, K., Hamid, S. A. R., Khawaja, K. F., Zada, S., Jamil, S., Qaisar, M. N., Vega-Muñoz, A., Contreras-Barraza, N., & Anwer, N. (2022). Online Customer Experience Leads to Loyalty via Customer Engagement: Moderating Role of Value Co-creation. *Frontiers in Psychology*, 13(July), 1–15. <https://doi.org/10.3389/fpsyg.2022.897851>

Al-Refay, H. A. N., Abdulhussein, A. S., & Al-Shaikh, S. S. K. (2022). The impact of financial accounting in decision making processes in business. *International Journal of Professional Business Review*, 7(4), e0627–e0627.

Al Sukaini, A. K. M. (2022). Digital Marketing's Influence on Consumer Purchasing Decision: A Case Study in Iraq. *Journal of Asian Multicultural Research for Social Sciences Study*, 3(3), 120–132.

Ali, H. A., Bahari, M., & Iahad, N. A. (2024). A Bibliometric Analysis of Social Commerce Research Using Scopus Database. *International Journal of Academic Research in Business & Social Sciences*. doi: 10.6007/ijarbss/v14-i7/22040

Almasoodi, M. F., Rahman, S., Basendwah, M., & Alfarra, A. N. (2023). Leveraging Digital Transformation to Enhance Quality Tourism Services in Babylon City, Iraq. *International Journal of Sustainable Development & Planning*, 18(10).

Attar, R. W., Almusharraf, A., Alfawaz, A., & Hajli, N. (2022). New Trends in E-Commerce Research: Linking Social Commerce and Sharing Commerce: A Systematic Literature Review. *Sustainability*, 14(23), 16024.

Bala, M., & Verma, D. (2018). A critical review of digital marketing. M. Bala, D. Verma (2018). A Critical Review of Digital Marketing. *International Journal of Management, IT & Engineering*, 8(10), 321–339.

Barari, M., Ross, M., Thaichon, S., & Surachartkumtonkun, J. (2021). A meta-analysis of customer engagement behaviour. *International Journal of Consumer Studies*, 45(4), 457–477. <https://doi.org/10.1111/ijcs.12609>

Bazi, S., Filieri, R., & Gorton, M. (2023). Social media content aesthetic quality and customer engagement: The mediating role of entertainment and impacts on brand love and loyalty. *Journal of Business Research*, 160, 113778.

Bhutto, M. Y., Khan, M. A., Sun, C., Hashim, S., & Khan, H. T. (2023). Factors affecting repurchase intention of organic food among generation Z (Evidence from developing economy). *Plos One*, 18(3), e0281527.

Bilro, R. G., & Loureiro, S. M. C. (2020). A consumer engagement systematic review: synthesis and research agenda. *Spanish Journal of Marketing - ESIC*, 24(3), 283–307. <https://doi.org/10.1108/SJME-01-2020-0021>

Blut, M., Kulikovskaja, V., Hubert, M., Brock, C., & Grewal, D. (2023). Effectiveness of engagement initiatives across engagement platforms: A meta-analysis. *Journal of the Academy of Marketing Science*, 51(5), 941–965. <https://doi.org/10.1007/s11747-023-00925-7>

Calhoun, M., & McCarthy, V. (2023). An unintended consequence of flexible work arrangements (FWAs)—the role of peer resentment on turnover intentions in public accounting. *Journal of Accounting & Organizational Change*, 19(3), 401–419.

Chelpanova, D. (2023). Development of Customer Engagement: Case Company Best in Hel.

Chen, S., Han, X., Bilgihan, A., & Okumus, F. (2021). Customer engagement research in hospitality and tourism: a systematic review. *Journal of Hospitality Marketing & Management*, 30(7), 871–904.

Connolly, R., Sanchez, O. P., Compeau, D., & Tacco, F. (2023). Understanding Engagement in Online Health Communities: A Trust-Based Perspective. *Journal of the Association for Information Systems*, 24(2), 345–378. <https://doi.org/10.17705/1jais.00785>

Cook, K. S., Cheshire, C., Rice, E. R. W., & Nakagawa, S. (2013). Social exchange theory. *Handbook of Social Psychology*, 61–88.

Di Ruscio, S. (2021). Customer Centricity as synonym of future competitiveness: implications in the management of customer satisfaction-Espritnet Case Study.

Do, D. K. X., Rahman, K., Robinson, L. J., & Bowden, J. (2023). Negative customer engagement in emerging markets: cognitive dimension. *Journal of Strategic Marketing*, 31(2), 370–402.

Dwivedi, A., & McDonald, R. E. (2020). Examining the efficacy of brand social media communication: a consumer perspective. *Journal of Marketing Theory and Practice*, 28(4), 373–386.

Fatmawati, I., & Fauzan, N. (2021). Building customer trust through corporate social responsibility: The Effects of corporate reputation and word of mouth. *The Journal of Asian Finance, Economics and Business*, 8(3), 793–805.

Galib, M. H., Hadeel, A.-H., Al-Amad, A., Hailat, K. Q., & Bazi, S. (2023). Determinants of Customer Engagement: Role of User-Generated Content. *International Journal of Electronic Commerce Studies*, 14(3), 69–88.

Gouji, R., Taghvaei, R., & Soleimani, H. (2016). The effect of corporate image on the formation of customer attraction. *Management Science Letters*, 6(10), 655–670.

Hair, J., Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2023). Advanced issues in partial least squares structural equation modeling. saGe publications.

Harmeling, C. M., Moffett, J. W., Arnold, M. J., & Carlson, B. D. (2017). Toward a theory of customer engagement marketing. *Journal of the Academy of Marketing Science*, 45, 312–335.

Hess Jr, R. L. (2008). The impact of firm reputation and failure severity on customers' responses to service failures. *Journal of Services Marketing*, 22(5), 385–398.

Hollebeek, L. D., & Macky, K. (2019). Digital content marketing's role in fostering consumer engagement, trust, and value: Framework, fundamental propositions, and implications. *Journal of Interactive Marketing*, 45(1), 27–41.

Karamdsani, R., Delirhasannia, R., & Samadianfard, S. (2025). Predicting saltwater concentration in coastal aquifers using hybrid models. *Environment and Water Engineering*, 11(2), 144–154.

Hoyer, W. D., Kroschke, M., Schmitt, B., Kraume, K., & Shankar, V. (2020). Transforming the customer experience through new technologies. *Journal of Interactive Marketing*, 51(1), 57–71.

Hruska, J., & Maresova, P. (2020). Use of social media platforms among adults in the United States—behavior on social media. *Societies*, 10(1), 27.

Hussain, W. M. H. W., & Ayob, A. H. (2023). Trends in digital marketing research: A bibliometric analysis. *International Journal of Marketing, Communication and New Media*, 11(20).

Jamal, F. N., Othman, N. A., Saleh, R. C., Nurhanay, A. H., & Rohmah, W. (2021). Evaluating information credibility toward green marketing in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(2), 427–438.

Jessen, A., Hilken, T., Chylinski, M., Mahr, D., Heller, J., Keeling, D. I., & de Ruyter, K. (2020). The playground effect: How augmented reality drives creative customer engagement. *Journal of Business Research*, 116(May), 85–98. <https://doi.org/10.1016/j.jbusres.2020.05.002>

Kitchens, B., Dobolyi, D., Li, J., & Abbasi, A. (2018). Advanced customer analytics: Strategic value through integration of relationship-oriented big data. *Journal of Management Information Systems*, 35(2), 540–574.

Lederman, R., Fan, H., Smith, S., & Chang, S. (2014). Who can you trust? Credibility assessment in online health forums. *Health Policy and Technology*, 3(1), 13–25.

Lim, X.-J., Cheah, J.-H., Waller, D. S., Ting, H., & Ng, S. I. (2020). What s-commerce implies? Repurchase intention and its antecedents. *Marketing Intelligence & Planning*, 38(6), 760–776.

Lin, X., Wang, X., & Hajli, N. (2019). Building e-commerce satisfaction and boosting sales: The role of social commerce trust and its antecedents. *International Journal of Electronic Commerce*, 23(3), 328–363.

Lioukas, C. S., & Reuer, J. J. (2015). Isolating trust outcomes from exchange relationships: Social exchange and learning benefits of prior ties in alliances. *Academy of Management Journal*, 58(6), 1826–1847.

Malesev, S., & Cherry, M. (2021). Digital and social media marketing-growing market share for construction SMEs. *Construction Economics and Building*, 21(1), 65–82.

Mariani, M. M., & Nambisan, S. (2021). Innovation analytics and digital innovation experimentation: the rise of research-driven online review platforms. *Technological Forecasting and Social Change*, 172, 121009.

Mariani, M. M., & Wamba, S. F. (2020). Exploring how consumer goods companies innovate in the digital age: The role of big data analytics companies. *Journal of Business Research*, 121, 338–352.

Marolt, M., Zimmermann, H.-D., Žnidaršič, A., & Puciha, A. (2020). Exploring social customer relationship management adoption in micro, small and medium-sized enterprises. *Journal of Theoretical and Applied Electronic Commerce Research*, 15(2), 38–58.

Mohamed, M. A., Salimmadi, M., Kalf, H. A. I., Altememy, H. A., Al-Muttar, M. Y. O., Farhan, M. A., Jalil, S. H., & Hammood, J. A. (2023). Mediating Role of Customer Trust in the Relationship between Service Quality and Customer Loyalty: Empirical Evidence from Iraqi Banking Customers. *International Journal of Operations and Quantitative Management*, 29(2), 252–272.

Mubdir, G. A., Hashim, S., Ayob, A. H., & Rosli, N. (2024). Online Purchase Intention using Social Media: A Systematic Literature Review. *Engineering, Technology & Applied Science Research*, 14(5), 17261–17268.

Mubdir, G. A., Hashim, S., Ayob, A. H., & Rosli, N. (2025). Exploring Customer Engagement in Social Commerce: A Literature Review of Frameworks, Pathways, and Emerging Trends. *Engineering, Technology and Applied Science Research*, 15(2), 20601–20608. <https://doi.org/10.48084/etasr.9452>

Nadeem, W., Tan, T. M., Tajvidi, M., & Hajli, N. (2021). How do experiences enhance brand relationship performance and value co-creation in social commerce? The role of consumer engagement and self brand-connection. *Technological Forecasting and Social Change*, 171(June), 120952. <https://doi.org/10.1016/j.techfore.2021.120952>

Naimi-Sadigh, A., Asgari, T., & Rabiei, M. (2022). Digital transformation in the value chain disruption of banking services. *Journal of the Knowledge Economy*, 13(2), 1212–1242.

Nazir, S., Khadim, S., Asadullah, M. A., & Syed, N. (2023). Exploring the influence of artificial intelligence technology on consumer repurchase intention: The mediation and moderation approach. *Technology in Society*, 72, 102190.

Nguyen, N. T. T., Nguyen, N. P., & Thanh Hoai, T. (2021). Ethical leadership, corporate social responsibility, firm reputation, and firm performance: A serial mediation model. *Heliyon*, 7(4), e06809. <https://doi.org/10.1016/j.heliyon.2021.e06809>

Nyadzayo, M. W., Leckie, C., & Johnson, L. W. (2020). The impact of relational drivers on customer brand engagement and brand outcomes. *Journal of Brand Management*, 27(5), 561–578.

Omar Zaki, H., Omar, N. A., Hashim, S., Kamarulzaman, Y., & Lada, S. (2024). Talk to engage: The influence of smartphone voice assistants on consumers' brand engagement. *Journal of Global Scholars of Marketing Science*, 34(4), 584–608.

Onofrei, G., Filieri, R., & Kennedy, L. (2022). Social media interactions, purchase intention, and behavioural engagement: The mediating role of source and content factors. *Journal of Business Research*, 142, 100–112.

Palese, B., & Usai, A. (2018). The relative importance of service quality dimensions in E-commerce experiences. *International Journal of Information Management*, 40, 132–140.

Pardo-Jaramillo, S., Muñoz-Villamizar, A., Osuna, I., & Roncancio, R. (2020). Mapping research on customer centricity and sustainable organizations. *Sustainability*, 12(19), 7908.

Patterson, Yu, & Ruyter, D. (2006). Consumer Brand Engagement in Social Media: Conceptualization, Scale Development & Validation. ANZMAC Conference: Understanding Customer Engagement in Services, 1–47.

Phan Tan, L., & Le, T. H. (2023). the Influence of Perceived Price and Quality of Delivery on Online Repeat Purchase Intention: the Evidence From Vietnamese Purchasers. *Cogent Business and Management*, 10(1). <https://doi.org/10.1080/23311975.2023.2173838>

Qalati, S. A., Vela, E. G., Li, W., Dakhan, S. A., Hong Thuy, T. T., & Merani, S. H. (2021). Effects of perceived service quality, website quality, and reputation on purchase intention: The mediating and moderating roles of trust and perceived risk in online shopping. *Cogent Business & Management*, 8(1), 1869363.

Raheem Naeem Naeem, A. (2022). The effect of perceived equity and perceived value on online purchase intention in amazon: A case of Iraqi customers. *İstanbul Gelişim Üniversitesi Lisansüstü Eğitim Enstitüsü*.

Rashid, A., & Rokade, V. (2021). Multi-criterion decision making approach to assess retail service quality: A market perspective from Iraq. *Prabandhan: Indian Journal of Management*, 14(3), 49–63.

Riar, M., Korbel, J. J., Xi, N., Meywirth, S., Zarnekow, R., & Hamari, J. (2023). Augmented Reality in Interactive Marketing: The State-Of-The-Art and Emerging Trends. *The Palgrave Handbook of Interactive Marketing*, 301–327.

Rosli, N., Johar, E. R., Lazim, M. L. H. B. M., Hashim, S., & Juhari, N. F. (2024). Who's the Winner? A Comparative Study of Like, Comment and Share Functions in Consumers' Purchase Intention between Facebook and Instagram. *Institutions and Economies*, 139–166.

Rosli, N., Mohamad, A. D. B., Johar, E. R., Hashim, S., & Lim, X.-J. (2025). Beyond Borders: The Transcendent Effect of Korean Celebrity Credibility on Brand Perceptions among Malaysian Youth-A Necessary Condition Analysis. *Heliyon*.

Sallaku, R., & Vigolo, V. (2022). Predicting customer loyalty to Airbnb using PLS-SEM: the role of authenticity, interactivity, involvement and customer engagement. *TQM Journal*. <https://doi.org/10.1108/TQM-12-2021-0348>

Sapienza, D. (2020). Enhancing customer centricity in New Service Development in a business to business context.

Schweiger, S., & Cress, U. (2019). Attitude confidence and source credibility in information foraging with social tags. *PloS One*, 14(1), e0210423.

Tan, Q. L., Hashim, S. Bin, Abdullah, N. L., Zaki, H. O., & Zheng, Z. (2025). Bibliometric insights into the impact of values on consumer sustainable environmental behavior: Current trends and future directions. *Sustainable Futures*, 100582.

Theodora, T. F. I., & Napitupulu, T. A. (2023). Analysis of factors that affect purchase intention on mobile Games as a Service (GaaS). *Jurnal Mantik*, 7(2), 546–556.

Wang, H., & Ayob, A. H. (2024). A Meta-analysis of the Impact of Mental Health Communication on Entrepreneurs' Management Perceptions and Performance: The Role of Social Media Discussions. *Review of Communication Research*, 12, 237–250.

Wang, P., & Huang, Q. (2022). Digital influencers, social power and consumer engagement in social commerce. *Internet Research*, June. <https://doi.org/10.1108/INTR-08-2020-0467>

Zaidan, M. N., & Raju, V. (2021). Factors affecting the online purchase intention among Iraqi using enhanced technology acceptance model. *IJAR*, 7(7), 52–61.

Zhang, L., Zaki, H. O., Hashim, S., & Omar, N. A. (2025). The role of personalization and emotional attachment on privacy calculus: an empirical study of intelligent voice assistant. *Asia Pacific Journal of Marketing and Logistics*.

Ferdous, J., Afrida, A., & zulkifli, Z. (2024). Computerized resume screening system for HR management. *Journal of Advances in Technology and Engineering Research*, 10(1). <https://doi.org/10.20474/jater-10.1.3>

Wenning, C., Sijia, L., Bhandari, K. S., Nodirbek, K., & Jung, D. (2021). Comparation of Shell Thickness Integration Rules and Element Types on Single Point Incremental Forming (SPIF) Simulation. *Journal of Advances in Technology and Engineering Research*, 7(1). <https://doi.org/10.20474/jater-7.1.3>

Ayub, M., Mumtaz, A., Ahmad, U., & Abdullah, M. (2021). A review on the impact of AI as big data in computer network environment. *Journal of Advances in Technology and Engineering Research*, 7(2). <https://doi.org/10.20474/jater-7.2.3>

M, P., S, S., & M, I, U. (2020). The effect of different salinity levels in okra fruit by split- plot design. *Journal of Applied and Physical Sciences*, 6(2). <https://doi.org/10.20474/japs-6.1.2>

Iraguha, F., Ramelan, A. H., & Setyono, P. (2020). The influence of environmental factors on COVID-19: Review. *Journal of Applied and Physical Sciences*, 6(1). <https://doi.org/10.20474/japs-6.1.4>

Use of liquid smoke for sustainable food preservation and postharvest loss and waste reduction (A review). (2019). *Journal of Applied and Physical Sciences*, 5(2). <https://doi.org/10.20474/japs-5.2.1>

Aslam, A., Arifin, S., Noor, M. S., Husaini, H., & Akbar, I. Z. (2024). Meta analysis: Relationship of health service quality with patient satisfaction in hospital. *Journal of Advances in Health and Medical Sciences*, 10(1). <https://doi.org/10.20474/jahms-10.4>

Putri, M. A., Husaini, H., Marlinae, L., Kania, N., & Prihatini, N. S. (2023). Relationship of knowledge, attitude, and availability of facilities with nurse behavior in disposing solid medical waste (Case study at Bhayangkara Hospital, Balikpapan, East Kalimantan). *Journal of Advances in Health and Medical Sciences*, 9(1). <https://doi.org/10.20474/jahms-9.4>

Hetiutami, S. (2022). Iron intake, dental and gum disease as risk factors of anemia in pregnancy in Bajuin sub-district. *Journal of Advances in Health and Medical Sciences*, 8(1). <https://doi.org/10.20474/jahms8.3>

Savila, Z., Lin, S. K. P., & Yee, C. Y. (2025). Do Athletes Differ in Religious Coping: Gender Perspective of Sports Motivation. *Journal of Management Practices, Humanities and Social Sciences*, 9(3). <https://doi.org/10.33152/jmphss-9.3.5>

Ambag, S. (2024). Unpacking the Role of Leadership and Entrepreneurial Skills: Mediation Moderation Enhancing the Firm Innovativeness. *Journal of Management Practices, Humanities and Social Sciences*, 8(6), 36-52.

Abbas, A., Hussain, T., Hussain, H., Arif, S., & Batool, S. (2024). Navigating urban environmental hazards: policies and pathways to health equity in Pakistan within the framework of sustainable development goals. *Journal of Management Practices, Humanities and Social Sciences (JMPHSS)*, 8(6), 16-24.

Putridinanti, A., Nawarinir, A. T., & Hidayah, A. A. (2025). Building Memorable Experiences: The Influence Of Authenticity And Experiencescape On Me Morable Experiences And Re-Visiting Intentions. *Journal of Advanced Research in Social Sciences and Humanities*, 10(1), 34-43.

Behera, B., & Gangadhar, M. R. (2025). Repatriation and the Future of Indigenous Heritage: Bringing Voice to Silent Witnesses, a Museum Anthropological Analysis. *Journal of Advanced Research in Social Sciences and Humanities*, 10(1), 14-23.

Prasetyo, D., & Wilantara, M. (2025). Media Construction on the Closeness of Prabowo, Hary Tanoe, and Trump. *Journal of Advanced Research in Social Sciences and Humanities*, 10(2), 10-19.

Ahmad, Z., Suleman, M., Sabtai, M., Abdur Rehman, M., ur Rahman, W., & Bilal, H. (2023). Optimum Utilization of Volcanic Rock as Pozzolana for the Maximum Compressive Strength of Mortar. *Journal of ICT, Design, Engineering and Technological Science*, 7(2). <https://doi.org/10.33150/jitdets-7.2.4>

Rehman Hamid, M. (2024). Strength Analysis of Ultra-High-Performance U-H-P Steel Fibre Reinforced Mortar Part of Concrete Using Rice Husk Ash & Nano Silica Fume. *Journal of ICT, Design, Engineering and Technological Science*, 8(1). <https://doi.org/10.33150/jitdets-8.1.2> <https://doi.org/10.33150/jitdets-8.1.4>

Muhammad, S. (2023). Optimization of Engineering Properties and XRD Pattern of the Conventional Brick by Recycling the Discarded Cigarette Butts. *Journal of ICT, Design, Engineering and Technological Science*, 7(2).

Aji H, B., & Novida, H. (2025). A woman with primary amenorrhea due to non-Classical congenital adrenal hyperplasia. *Perinatal Journal*, 33(2). <https://doi.org/10.57239/prn.25.03320027>

Ahmad, A. (2023). The impact of performance management systems on employee motivation and turnover: A mixed-methods study in manufacturing companies. *Journal of Administrative and Business Studies*, 9(2), 86-101.

Said, L. M., Hong-bo, T., & Rashid, M. (2025). Competitiveness analysis of Tanzanian agricultural exports: Trends and challenges. *Journal of Administrative and Business Studies*, 11(2). <https://doi.org/10.20474/jabs-11.2.1>

Kahil, B. (2025). The influence of market orientation on firm performance: A mediated-moderated model of social media crowdsourcing and competitive advantage in a dynamic environment. *Journal of Administrative and Business Studies*, 11(2). <https://doi.org/10.20474/jabs-11.2.2>

Fitriana, R. (2022). Impact of tax avoidance and resource & development outlay on financial performance of the firms from non-financial sector of Pakistan. *Journal of Administrative and Business Studies*, 8(1), 15-28.

Ndububa, C. L., & Ugoala, B. (2025). An analysis of contextual adaptation in ChatGPT's language use. *Journal of Advances in Humanities and Social Sciences*, 11(1). <https://doi.org/10.20474/jahss-11.1.1>

P. K, Rajagopal., & K, Sreekala. (2024). Tech for Inclusion: Empowering people with special needs in India. *Journal of Advances in Humanities and Social Sciences*, 10(1). <https://doi.org/10.20474/jahss-10.1.2>

Nizar, M., Ilmi, B., Noor, M. S., & Suhartono, E. (2022). Meta-analysis: Effect of health media types on children's knowledge about balanced nutrition. *Journal of Advances in Humanities and Social Sciences*, 8(1). <https://doi.org/10.20474/jahss-8.1.4>

Fatima, S., & Zia, A. (2022). Violence in educational institutions and its effects on students' achievement. *Journal of Advances in Humanities and Social Sciences*, 8(2). <https://doi.org/10.20474/jahss-8.2.2>

Haykal, H., Permanasari, A., & Rabbani, K. A. (2022). The legal status of fiduciary guarantee belongs to members of save and loan cooperatives due to bankruptcy. *Journal of Advances in Humanities and Social Sciences*, 8(1). <https://doi.org/10.20474/jahss-8.1.2>

Srivastava, M., & Sivaramakrishnan, S. (2022). A bibliometric analysis of the structure and trends of customer engagement in the context of international marketing. *International Marketing Review*, 39(4), 836–851. <https://doi.org/10.1108/IMR-06-2021-0204>

Statista. (2021). Digital Commerce: E-commerce Overview. In Statistica. <https://www.statista.com/outlook/dmo/ecommerce/iraq#revenue>

Statista. (2024). Value of social commerce sales worldwide from 2022 to 2030. <https://www.statista.com/statistics/1251145/social-commerce-sales-worldwide/>

Stravinskienė, J., Matulevičienė, M., & Hopenienė, R. (2021). Impact of corporate reputation dimensions on consumer trust. *Engineering Economics*, 32(2), 177–192.

Tahir, J. M., & Arije, U. M. (2021). Factors Influencing Consumer Purchase Intention: A Study of Bookstores in Kurdistan Region of Iraq. *International Fellowship Journal of Interdisciplinary Research*, 1(1), 19–35. <https://doi.org/10.5281/zenodo.4459943>

Tan, A., Hashim, S. Bin, Zuo, J., & Cheng, J. (2024). Consumer responses and determinants in geographical indications agricultural product consumption: A ten-year systematic review. *F1000Research*, 13, 1410.

Tan, C. C., Praditmon, W., Pattanadeekul, A., & Chimwan, S. (2019). Intercepting stimulus-organism-response model, theory of planned behavior and theory of expectancy confirmation in the study of smartphone consumer behavior: A Thai university student perspective. *Asia Pacific Journal of Religions and Cultures*, 3(2), 27–48.