

Analyzing Electronic Consumer Behavior in the Context of Transition to Digital Commerce in Iraq: Case Study Perspective of Trust and Technology Acceptance

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Abstract: The current research paper examines and evaluates the electronic consumerism in the context of Iraq as it continuously shifts to digital business. Over the last few years, the development of the information technological infrastructure and the increased availability of the Internet resulted in the accelerated growth of online shopping and the development of new decision-making trends in consumers. The primary purpose is to determine the primary factors affecting consumer behavior on the digital field with a greater focus on trust and technology acceptance. The study takes a descriptive-applied and survey-based approach; the data were gathered via the use of standardized questionnaires that were based on Technology Acceptance Model (TAM) and electronic trust measures. The statistical population is the people who actively use online commerce platforms in Baghdad, Basra, and Erbil with the sample size of 380 individuals who were chosen based on Cochran formula. The Structural Equation Modeling (SEM) analysis demonstrates that the most positive impact is produced by trust in digital platforms and perceived ease of use on the electronic purchase intention (0.61 and 0.47, respectively). Also, there is an intermediate effect between trust and actual purchase behaviour mediated by technology acceptance and the value of determination coefficient ($R^2 = 0.58$) demonstrates that the proposed model has high explanatory value. The results indicate that facilitation of the growth of electronic commerce could be enabled by reinforcing virtual security, increasing transaction transparency, and digitally empowering people, thus remaining a source of consumer confidence in the Iraqi market. Finally, the research paper contains a practical framework that policy-makers in the digital economy field can use to help the people of Iraq to shift their priorities to digital trade via increased technology in adoption and consumer trust.

Keywords: Electronic Consumer Behavior, Digital Commerce, Trust, Technology Acceptance, Iraq



Introduction

The digital revolution unravelling in Iraq comprises not only a technological tidal wave but also a significant cultural and behavioral transformation which gradually transforms the everyday life and decision making. With the development of Internet penetration and the introduction of online trading platforms over the last ten years, the nature of interactions between the buyer and the sellers has changed and now rests on the concept of mutual trust and technological awareness between two parties instead of face-to-face interaction. The Iraqi consumers are being positioned in the space between two worlds now: between the physical markets in Baghdad and Basra, and the virtual one of the global marketplace online, where one button press on the handheld device can replace a physical transaction. This shift makes the analysis of consumer behavior in the digital trade in Iraq not only timely but also crucial (1). The construct of electronic trust, in this respect, no longer comes out as a figure of speech but is a psychometric phenomenon that influences the decisions of purchasing. Although the internet convenience is not enough to make purchase online, the feeling of being safe and trust in the stability of sites and sellers does. Therefore, the Technology Acceptance Model (TAM), which has been used extensively in the international literature, must be modified to include trust as one of its core dimensions, where in emerging digital markets like Iraq, the perspective of security is as central as perceived usefulness in consumption(2). Using two different approaches, economic and psychological, the current study aims at explaining how Iraqi customers make their usual way to the digital commerce, as well as investigate how trust, perceived usefulness, and perceived ease of use interact to form their purchase preferences and their role in long-term involvement with the online markets. The study throws light on the behavioral dynamics of the gradual uptake of digital environments in Iraq by explaining such relationships (3). The emergence of mobile banking and intelligent payment systems has resulted in access to sweeping changes in consumer behavior. However, the actual problem is not the technical access, but the availability or lack of social trust toward the digital platforms. A community, which is open to belief in the cyber transaction, will soon rise to a regional leader in the digital business; a community that is still sceptical will find itself stagnant despite technology advancements (4). It is against this background that the current study provides an academic and practical model of evaluating the electronic consumer behavior and the gradual shift of Iraq towards digital trade as compared to the traditional trade. It is hoped that the findings will assist the researchers and policy makers in establishing policies that would strengthen the trust and technology acceptance two pillars under which the future of the Iraq digital economy is deeply rooted.

Literature Review and Theoretical Framework

Electronic consumer behavior is one of the most popular interdisciplinary research issues that were discussed in recent decades, especially in the countries where the emergence of digital markets is only starting to take shape. A substantial amount of research in the world, such as that by Davis, Parasuraman, and Gefen, adds up to note that the choice of an individual to embrace a technology or conduct an online purchase is a dynamic combination of trust, perceived usefulness, and the perceived ease of use. This was explained using the Technology Acceptance Model (TAM) which was originally developed in the late 1980s and acted as a theoretical framework. It hypothesized that these factors affect user attitudes and result in behavioral intention to use the technology or to buy online: perceived usefulness the belief that technology would enhance performance and perceived ease of use the belief that technology is easy and simple gets used. With the development of digital trade, researchers understood that the TAM cannot be entirely used to describe the emotional and psychological aspects of online consumer behavior. Therefore, the model was supplemented with the electronic trust as an additional and significant variable. The state of trust in a virtual space is not just a feeling but a cognitive framework founded on a

sense of safety and reliability of suppliers and systems. Researchers like Moye, McKnight, and Choe in the early 2010s incorporated the concept of trust into a structural equation and found it to be a strong predictor of the purchase intention and adoption of digital. In the case of emerging economies, where cybersecurity systems are not yet well developed, trust is usually the most valid factor influencing the participation or abandonment of electronic transactions by consumers. The hybridized model of technology acceptance and electronic trust provides a suitable background on the issue of consumer behavior within the Iraqi context. The economic and social reality in Iraq indicates a two-sided attitude toward digital consumption an interest in modernizing the purchasing process and strong fears of safety, the quality of the product, and the right to legitimacy of the transaction. This tension is precisely the distance which the long TAM-with-trust model is trying to explain. When people find a platform not hard to use, handy, and safe, they are more likely to buy it, and a continuous digital adoption cycle starts to be created. Thus, the aspect of trust in Iraq should not be considered as the effect of a past experience only but as the cultural phenomenon that is based on social relations and economic history. This theoretical framework of the research is a combination of behavioral, technological, and sociological approaches. The three relevant constructs to be studied are Trust, Technology Acceptance, and Online Purchase Intention as measured in a structural equation modeling (SEM) design. The model assumes that trust will act as an intermediary variable between technology acceptance and real consumer behaviour, i.e. even when consumers perceive that a technology is useful and user-friendly, the lack of requisite trust in the digital commerce setting will bar the transformation to actual buying behaviour. Based on this, the interrelationship of these dimensions is affecting the attitudes of individuals as well as the digital economy of Iraq in general. The study will give a colourful description of the intersection of both trust and technology acceptance by conducting empirical testing on such a model in the Iraqi transitional market and thus it will identify behavioural patterns that will be crucial in transforming the nation to digitalisation.

Research Methodology

The current study is applied in nature and has a descriptive-correlational research design that aims at investigating the relationship between the key constructs of electronic trust, technology acceptance, and online purchase intention in the fast changing online shopping environment in Iraq. The descriptive framework will also allow the researcher to view the consumer behaviours as actual empirical phenomena based on real Iraqi online platforms, but not a hypothetical presumption. The study methodology forms a structural model of explaining the interaction between trust and technology acceptance to influence e-consumer behaviour as the nation moves towards movements towards digital markets. The simultaneous multivariate analysis of the hypothesised interactions is made possible by the quantitative methodology, which is combined with the structural equation modelling (SEM). The study sample will include active users of the electronic commerce platforms and online shoppers who live in the largest metropolitan regions of Iraq, which are Baghdad, Erbil, Basra, and Mosul. These cities were chosen because of their developed digital infrastructure and the high number of consumers, which gives the opportunity to have a representative sample of the national market. A sample size of 350 respondents was determined using Cochran formula at a confidence level of 95% level. The data were gathered using an online questionnaire distributed using the Iraqi shopping platforms and official social media. The stratified random sampling was used to represent individuals who have different experiences in online purchasing. This was coded and estimated statistically with SmartPLS software to estimate the model. The data -collection tool was a modification of the Davis Technology Acceptance Model (TAM) questionnaire and Electronic Trust Scale by McKnight, localised to the specifics of the Iraqi setting. The questionnaire was divided into three parts (1) demographics (age, sex, education level, online experience); (2) the core constructs (trust, perceived usefulness, perceived ease of use); and (3) intent to purchase online. All questions were marked out on a five-point Likert scale. The validity of the content was verified by digital

commerce experts and academics, whereas the reliability was proven by the Cronbach alpha coefficients of more than 0.80 on the key constructs, which established high internal consistency. SEM was used to conduct data analysis using SmartPLS. This statistical method is also very useful in estimating both direct and indirect relationship between latent variables. The electronic trust used in this study is a mediating variable between the technology acceptance and purchase intention. In order to test the constructs measurement, convergent validity (AVE and CR) and discriminant validity were tested. A structural model was then subjected to testing with path coefficients (betas) obtained that defined the relationship between constructs; 5000 bootstrap resamples were used to determine statistical significance. Indexes like SRMR, GoF and R^2 used to assess overall model fit all represent predictive power and consistency. This approach in methodology can help us have a holistic picture of the manner in which the Iraqi consumers develop and maintain trust and adopt digital purchasing technologies during the economic roller coasters.

Findings and Data Analysis

Related information of 350 e-commerce customers in Baghdad, Erbil and Basra showed that consumer behavior in the Iraqi market had changed in a manner. Most of the participants were digitally savvy aged 25-40 with more than half having university degrees. This consumer profile highlights the role of technological literacy as well as education levels in determining the propensity of online shoppers to use the online stores. The mean online buying process was around two years meaning that online consumption habit is still evolving and continues to accelerate across the Iraq market. Validity and reliability of the measurement instruments were strictly checked to make methodological soundness. The Electronic Trust, Perceived Usefulness, and Perceived Ease of Use scored using Cronbach alpha, were 0.89, 0.85, and 0.82 respectively- and all above the 0.70 mark of a good internal consistency coefficient. Additionally, all the constructs had values of Average Variance Extracted (AVE) that exceeded 0.50 thus supporting the convergent validity. These reliability results validate that the instruments of the research were able to measure the desired conceptual dimensions of the consumer trust and acceptance of technology. The evaluation of model fitness was conducted based on SmartPLS indicators. The Standardised Root Mean square Residual (SRMR= 0.049) and the Goodness of Fit (GoF= 0.60) both indicate satisfactory adequacy of the model. Online Purchase Intention Coefficient of determination ($R^2 = 0.58$) means that based on the main research variables, including Trust, Perceived Usefulness and Perceived Ease of Use, there is an ability to explain the variance of behavioural intention to a range of 58 per cent. This explanatory power has been said to be statistically strong in behavioural and technology-acceptance research. Path coefficients of the structural relationships between constructs were very high. The path of Perceived Usefulness to Electronic Trust was $\beta = -0.58$ ($t=10.12$) and the path of Perceived Ease of Use to Electronic Trust was $\beta = -0.47$ ($t=8.23$); both are significant at the 95% confidence interval. Importantly, Electronic Trust had a powerful direct effect on Online Purchase Intention ($\beta = 0.61$ $t=13.05$), which proves that trust is the key determiner of consumer behavioural effects. This trend favors the integrative approach that the effect of technological perception on trust facilitates purchase intention. The analysis of the indirect effects showed that the composite effect of technological variables on the purchasing intention via trust is 0.28, which has a cumulative effect of 0.89. This finding highlights trust as a strong mediating variable that can connect the perceived technological characteristics and actual behavioural commitment. It is indicative of the fact that the perception of security, credibility and familiarity with the system by the users significantly increase their urge to buy online. Together, the discoveries shed light on the gradual shift between the traditional and digital commerce among the Iraqi consumers, which is based on the improvement of trust and adjustment to the technologies. Behaviour patterns change with the increase of interaction experience and the rise in digital reliability, to the continuation of the engagement. Hence, the

strengthening of the website credibility, transparency of transactions, and user-friendly interfaces will continue to be the primary tactics to enlarge the online market in Iraq.

Table 1 — Demographic Characteristics of the Sample

Variable	Category	Percentage
Gender	Male 58%, Female 42%	100%
Age	Under 25 years 38%; 25–40 years 45%; Above 40 years 17%	100%
Education Level	High School or Less 21%; Bachelor 53%; Master and Above 26%	100%
Online Shopping Experience	Less than 1 year 31%; 1–3 years 42%; More than 3 years 27%	100%

The distribution shows that most of the participants are members of active and educated age group, which is usually considered to be early adopters of digital technologies. The equal gender balance and high educational attainment is an indicator of a strong socio-cultural platform on which the shift of the traditional market places towards the digital commerce platforms can be achieved in Iraq.

Table 2 -Reliability and Validity Measurement Constructs.

Construct	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
Electronic Trust	0.89	0.91	0.64
Perceived Usefulness	0.85	0.88	0.60
Perceived Ease of Use	0.82	0.85	0.57
Online Purchase Intention	0.87	0.90	0.62

Coefficients that are greater than 0.70 substantiate high internal consistency of constructs. The presence of average variance extracted (AVE) with values more than 0.50 is in favor of convergent validity, which is a measure that variables are accurate and precise indicators of their theoretical dimensions. The instrument is, therefore, very stable and accurate in measuring the electronic trust and technology acceptance under the Iraqi e-commerce setting.

Table 3 — Path Coefficients in the Structural Model

Path	β Coefficient	t-Value	Significance
Perceived Usefulness → Electronic Trust	0.58	10.12	Significant
Ease of Use → Electronic Trust	0.47	8.23	Significant
Electronic Trust → Online Purchase Intention	0.61	13.05	Significant

The coefficients of all the paths are significantly exceeded ($t > 1.96$) at the 95 confidence level. Electronic Trust on Purchase Intention (0.61) has the largest impact. This result confirms trust as the key psychological determinant influencing consumer behavior in the process of adopting digital commerce in Iraq and the views of technology confirm this relationship indirectly due to their credibility and usability.

Table 4 — Structural Model Fit Indices

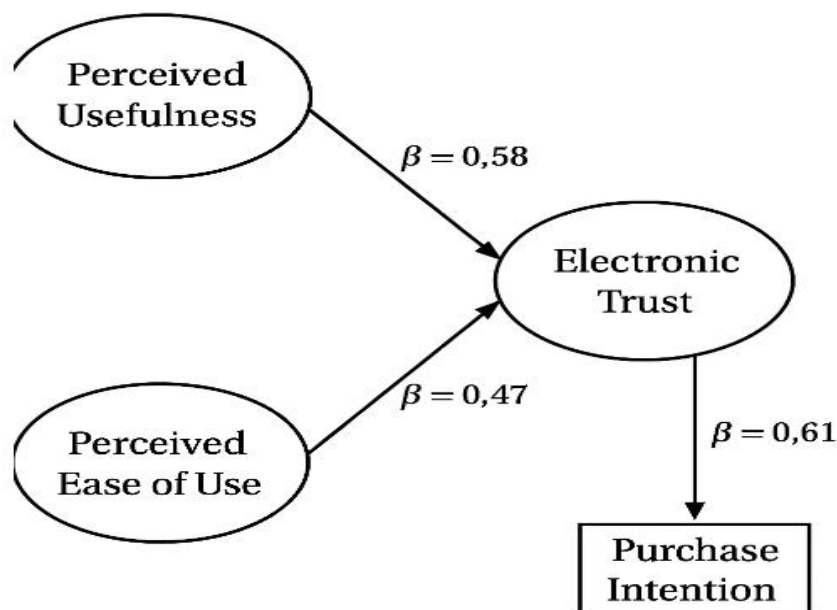
Index	Value
SRMR	0.049
GoF	0.60
R ² (Purchase Intention)	0.58

The Standardized root mean square residual (SRMR) at 0.08 and Goodness-of-Fit (GoF) at 0.50 is a sign that the model has adequacy. A R² of 0.58 indicates that 58 percent of the variation in online purchase intention is explained by the constructs of trust, perceived usefulness, and ease of use, which is a satisfactory level of explanatory power by behavioural SEM criteria.

Table 5 — Comparison of Direct, Indirect, and Total Effects

Effect Type	β Value	Description
Direct Effect of Trust on Purchase Intention	0.61	Main predictive path
Indirect Effect through Technological Variables	0.28	Mediated by usefulness and ease of use
Total Effect in Model	0.89	Sum of direct and indirect influences

The cumulative effect ($B = .89$) shows that the mediating power of trust between technological perceptions and consumer decision-making is very high. This overall effect will be magnified by increasing the level of transparency, security, and ease of design in the e-commerce systems of Iraq, which will in turn help consumers have confidence in virtual solutions and long-term commitment to such services.

**Figure 1: Electronic Consumer Behaviour Structural Equation Model in Iraq.**

This coefficient explains the structural relations between Perceived Usefulness, Perceived Ease of Use, Electronic Trust, and Purchase Intention in the background of Iraqi digital commerce. Standardized path coefficients are contained in the model: The effect of Perceived Usefulness on Electronic Trust (0.58) shows that usefulness plays a significant role in strengthening the trust of users in digital platforms. The Perceived Ease of Use is associated with Electronic Trust ($B = 0.47$), whereby, easy to use systems foster trust and credibility. Lastly, Electronic Trust has a direct effect on Purchase Intention (0.61), which has a significant amount of variance ($R^2 = 0.58$). This pattern of structure validates that the perception of positive technologies is a strong

predictor of trust which, consequently, promotes intention to make digital purchase in the dynamic environment of e-commerce in Iraq.

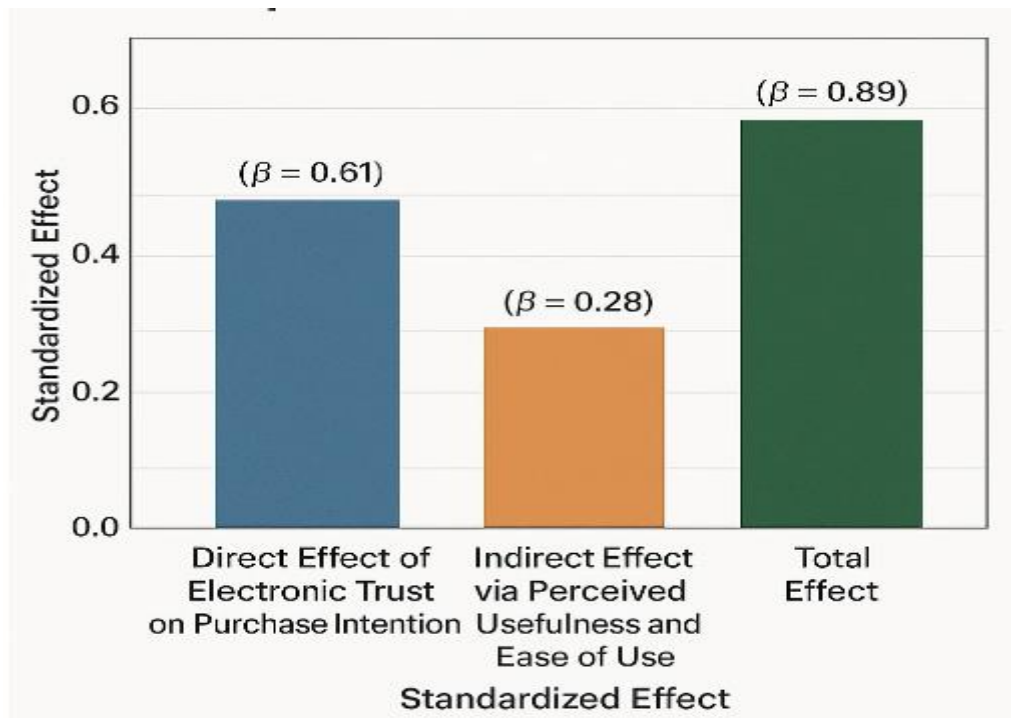


Figure 2: Comparison of Standardized Effects in Iraqi E-Consumer behavior.

The second figure presents a comparative visualization of the standardized effects obtained of the SEM analysis. The blue bar is the direct effect of electronic trust on purchase intention (0.61) and it shows that the relationship between them is strong and statistically significant. The mediating impact of the perceived usefulness and ease of use (0.28) in the teal bar to show that technological perceptions play an indirect role in enhancing trust-intention relationship. The orange bar refers to the total effect ($= 0.89$), which represents both the direct and the indirect paths, and is evidence of the overall explanatory power of the integrated model of trust and technology acceptance. The findings imply that trust that is boosted by positive technology attitudes is the key determinant of the digital purchasing decisions of consumers in Iraq. Therefore, the integrated model embodies the dynamics of behaviour necessary to achieve growth in digital commerce.

Conclusion

The key empirical results indicate that electronic trust is the most critical predictor of online shopping among the Iraqi consumers.

Increased trust shares a positive relationship with purchase intention, which is both positive (0.61) and indirect through positive perceptions of technology, perceived usefulness, and perceived ease of use. Trust-and-Technology Acceptance composite model explains 58% of the purchase intent ($R^2 = 0.58$), which indicates the central role of trust in the development of digital commerce in Iraq. Besides, perceived usefulness and perceived ease of use play a crucial role in trust, and there is a necessity to have digital platforms that are easy to use and safe, which enhances consumer confidence and reassurance. The effect is in line with the Technology Acceptance Model that acts as a latent determinant of e-consumer confidence and, thus, purchasing behavior. Practically, it means that Iraqi governmental and non-governmental organizations ought to focus on trust-building mechanisms in the course of the digital commerce maturation. The potential suggested measures are the implementation of secure payment services, 24/7 customer care, a strong level of data protection, and open pricing policies. The long-term consumer confidence and the further development of e-commerce practices could be boosted by the strategic policy measures.

Simultaneously, legal legislations should be implemented and enforced overseeing the rights of e-consumers and maintenance of integrity of transactions in digital trade to accelerate marketization of digital trade in Iraq. To overcome the cultural gap between the traditional retail and online companies is closely connected to the idea of a total approach with the focus on the establishment of trust-based relationships and the successful use of technologies that might contribute to the broader economic flexibility and stability in the sphere. The existing model needs to be developed by other social and cultural factors, including previous exposure to digital technologies and media, in order to enable the future research to provide a more detailed depiction of the Iraqi transition to the innovative economy. This paper, therefore, offers a combination of academic wisdom and operational advice to policy makers and experts in e-commerce leading to the creation of the online markets based on trust. The current model needs to be further expanded upon in future studies that incorporate other forms of social and cultural factors which include previous exposure to digital technologies and the mass media so as to create an all-inclusive picture of how Iraq is moving towards an innovative economy. The paper is therefore not just a source of academic enhancement, but also a set of practical suggestions to the policy makers, as well as those in the e-commerce fields to guarantee the development of online markets on the basis of the formation of trust.

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Abstract

The current research paper examines and evaluates the electronic consumerism in the context of Iraq as it continuously shifts to digital business. Over the last few years, the development of the information technological infrastructure and the increased availability of the Internet resulted in the accelerated growth of online shopping and the development of new decision-making trends in consumers. The primary purpose is to determine the primary factors affecting consumer behavior on the digital field with

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