E-Service Experience as the Antecedent of E-Trust & E-Loyalty: An Integration of Behavioral and Technology Perspective

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Abstract - The study investigated e-service experience dimensions and their relationship with e-trust and e-loyalty by integrating behavioral and technology models. The paper integrated attitude formation theories in consumer behavior (TRA, TPB) and Information Technology theories (TAM, UTAUT) for building the proposed theoretical framework and conceptual model. The study developed that e-service experience is a multi-dimensional construct. The study categorized e-service experience into a tangible component as website functional experience, intangible component as service delivery experience, and emotional component as relational experience with the service provider. The paper also distinguished between user relational characteristics and user personal characteristics. Relational factors acted as an emotional component of the e-service experience, while users personal factors acted as control variables in the relationships. Therefore, the e-service experience is a holistic representation of the consumer-service provider encounter on the internet and is conceptualized as a value creation process. The paper also discussed applying the concept for developing digital strategies for managers and a conceptual model for future researchers in the internet space.

Keywords: B2C, technology usages, technology and behavioral theories, e-services, conceptual model

INTRODUCTION

E-commerce websites can be categorized based on primary consumer needs (Arya and Srivastava, 2015). We categorized websites into two types based on consumer immediate need and mode of customer delivery. (1) Websites that provide products and services where the purchase process starts online, but service delivery is offline. (2) Websites that provide products and services where the purchase process starts online, and service delivery is entirely online.

This study focussed on the second category of websites. This category provided technology-mediated interactions through ATM, email, call center, internet, online chat, etc., and offered digital product delivery. The study covered widely used e-services like online banking services, mobile banking services, location-based mobile services, e-mail services, travel services, healthcare content, search content, e-gaming, e-educations, online information services, and social networking. The study, therefore, defined e-services as online products and services with digital delivery of services using interactive, technology-based customer service or self-service.

The e-service is perceived as high risk in the absence of a service person compared to face-to-face encounters and therefore perceived as high on credence properties. (Walker and Johnson, 2005). E-loyalty in e-commerce leads to the desired consumer responses such as Word-Of-Mouth (e-WOM), Recommendations, Repeat purchases because transactions with existing customers are likely to be more profitable than transactions with new customers. The literature review was undertaken with the key objective to determine e-customer experience determinants and dimensions and their relationship with outcome variables e-trust and e-loyalty. Though the importance of e-service experience in e-commerce is recognized in the literature, the conceptualization of e-services through a technology-based interface has received limited attention. Further, the absence of person-to-person interaction in technology-based interface, affective/relational dimension of e-customer experience was taken as absent in e-interface and therefore is wholly ignored in studies. The paper intends to develop an integrated framework of e-service experience, e-trust, and e-loyalty using established theories in Consumer Behaviour and Information Technology.

The research was initiated to develop a comprehensive understanding of three important concepts service experience, customer loyalty, and customer trust in an online context. Therefore, the study focussed on e-services experience, e-trust, and e-loyalty in online contexts. Thus, the study developed the following research questions:

Q1: What are the important determinants and dimensions of e-service experience?
Q2: How these e-services experience dimensions are related to e-loyalty?
Q3: How does e-trust influence the relationship between e-service experience and e-loyalty?

Q4: What are the control variables that influence the relationships of e-service experience with e-trust and e-loyalty?

RESEARCH METHODOLOGY

A literature search of research papers was carried out to identify e-services experience determinant factors that act as antecedents of e-loyalty and e-trust. Online academic database sources such as Google Scholar, EBSCO, ProQuest, Scopus, and journal publisher databases, search using query keywords "e-loyalty," "online loyalty," "e-trust," "online trust," "e-service experience," "online service experience," for online services context identified the relevant literature for the study. The literature is selected based on these keywords in the paper title, abstract, and keywords sections. A separate literature search was conducted to determine the original papers contributing to the developing theories relevant to this study. Literature from different B2C services contexts was also referred, to understand the constructs, construct definition, and operationalization.

LITERATURE REVIEW & HYPOTHESES

E-trust and E-loyalty

Customer loyalty is an essential strategy for e-businesses because initial purchases with new customers are likely to be less profitable than existing customers' purchases. This study distinguished e-attitudinal loyalty from e-behavioral loyalty. E-behavioral loyalty refers to actual usage and repurchase behavior. In contrast, e-attitudinal loyalty relates to users' perceived satisfaction or dissatisfaction towards these services, attitude towards service providers, and quality of relationship with service providers after repeated use of these services. (Walker and Johnson, 2005). Therefore, the paper argues that current repeat purchase behavior may be influenced by consumers' personal circumstances and may not indicate long-term commitment and loyalty towards the service provider. In the same context, the paper argued that the consumer's continuous use of e-services might not mean a loyalty relationship with the service providers. Another study emphasized that customer loyalty has two dimensions - attitudinal loyalty, which represents the degree of dispositional commitment towards the brand, and behavioral loyalty, which means repeat purchase of a brand. (Dai et al., 2011). We can define loyalty dimensions as attitudinal loyalty, which combines cognitive loyalty, affective loyalty & conative loyalty (intentions), and behavioral loyalty, as Word-Of-Mouth, recommendations and purchase, and repurchase actions (Rajaobelina et al., 2014). Attitudinal loyalty is also an antecedent to behavioral loyalty (Chaudhuri and Holbrook, 2001). According to cognitive loyalty, a customer has a preference for a certain brand over another brand. This concept is linked to the development of a positive attitude toward the brand (Harris and Goode, 2004). Conative loyalty is a behavior that is linked to a higher level of commitment (Zeithaml et al., 1996). Behavioral loyalty is the transition of the customer from intentions to actions such as a purchase or repeat purchase or a positive recommendation (Harris and Goode, 2004).

The concept of e-trust was divided into pre-use trust and post-use trust. The discussion focused on the importance of the consumers' e-service experience and the influences of online consumer loyalty. Pre-use trust is a cognitive component of trust, while post-use trust is an affective component of trust. Cognitive trust is a pre-condition to affective trust for the e-services experience. Post-use trust is seen as the consumer's perception of e-service providers on attributes of competence, integrity, and benevolence (Berraies et al., 2015). Online service providers typically try to build e-loyalty by developing trust and increasing switching costs. However, this strategy can lead to a reduction in customer loyalty if the customer is not satisfied with their service. This study revealed that trust is the most important factor that influences e-loyalty. Our review confirmed that trust is a more important predictor of e-loyalty than e-switching costs. Switching cost in the e-services context has a significantly lower influence than e-trust (Carter et al., 2014). Since there are very low constraints in the e-services environment, the e-switching cost is not relevant in the e-services context (Pura, 2005). Based on the review, the following hypothesis was developed:

H1: E-trust has a direct and positive effect on e-loyalty.

Determinants of E-service experience

The internet-mediated environment (IME) has changed how organizations and consumer interacts. The study established that e-content quality, e-delivery quality, website characteristics, and user relational characteristics with service providers contribute to building e-services consumer evaluation and perception. Therefore, e-service encounter is represented by consumer total e-service experience.
In his paper, Dai et al. (2011) covered essential determinants of customer service experience in IME: content quality, delivery quality, and linked enjoyment and e-loyalty. The study defined Online service quality as combining two dimensions: online service quality and online service delivery quality. The antecedents visual appearance, navigation, and customized preview affected online service content quality; antecedents accessibility, reliability, and timeliness affected online service delivery quality. The e-service quality has been identified as an influential factor for customer retention. Reliability, Responsiveness, Assurance, Security, Convenience, Efficiency, and Easiness to operate were conceptualized as perceived service quality dimensions. (Ghosh and Barua, 2014). A study conducted on this topic revealed that the perceived value of the e-service quality is related to the consumer's perceived value; perceived value significantly affects e-loyalty, which significantly affects the likelihood of buying from that brand (Rajat Gera, 2011).

In their study, Roy and Ganguli (2010) focused on five generic service quality parameters: customer service, information quality, comfort, reliability, and technology security. These factors were defined as factors that affect the service quality of the technology-based services. The study revealed that technological ease and reliability have a significant effect on the perceived service quality of existing customers. The study revealed that the usage of technology and customer service has a positive effect on the satisfaction of the customers. It also stated that the combination of these two factors has a significant effect on the loyalty of the customers.

Butt and Aftab (2012), in their study, established that the perceived quality of an e-services experience and the level of customer satisfaction were positively influenced by the consumer's attitude. Dai et al. (2011), in their study, established service enjoyment as a separate construct based on consumer post-service experience's perceived judgment. Transparency impacted trust indirectly through the mediation of satisfaction. Transparency also impacted trust directly. Satisfaction impacted trust directly. Transparency influenced continuance intention of use (Behavioural Loyalty) indirectly through the mediation of trust and satisfaction (Ruffin and Medina, 2014). Therefore, Transparency was seen as a pre-condition for e-satisfaction and e-trust and independent determinants under e-services experience.

The website characteristics that influence the level of e-trust and e-loyalty include the ease of navigation, the quality of information, privacy/security, and the company's reputation. The factors mentioned have a direct impact on the installed online trust of an individual. They also have an indirect impact through online trust on online loyalty (Rajaobelina et al., 2014). Ease of navigation refers to the process of accessing information that one needs to complete. The goal is to find the information that one needs to complete their tasks (Wang and Senecal, 2008). Quality of information refers to the accuracy, usefulness, completeness, relevance, ease of understanding, and updated information (Liang and Chen, 2009). The website design is the structure of the website space, which is determined by its formalizational attributes such as text structure, its graphic interface, use of images, animation, and videos (Streamtan and Muntean, 2008). The website's structure, content, and speed are all related to how users interact with it (Flavián et al., 2006). Website design plays a crucial role in attracting consumers' attention and producing positive attitudes (Moore et al., 2005).

The perceived security of e-commerce systems is the ability of e-businesses to protect their transactions against unauthorized access and fraud (Kalakota and Whinston, 1996). According to Goodwin (1991), perceived privacy refers to the customer's perception of how they were treated when they transacted or consumed in a public place. This perception is often triggered by the presence of an outside observer. This concept is often associated with the customer's ability to control the information that they provide or transact with. This perception is often triggered by the presence of an outside observer.

Walker and Johnson (2005), in their paper on banking services, argued that security, reliability, and confidentiality increased in the absence of personal contact with the service person. This resulted in increased uncertainty, perceived risk, and greater credence properties of technology-enabled services than similar personal service encounters. The findings established that regular use does not mean satisfying the use of a willing user nor proves a relationship with the service provider. Further, the customer expectation from service delivery through technology interface is the same as desired from human interaction. Therefore, the service provider needs to create as far as possible a substitute for elements of human interface such as online chat, call options in the technology interface.

Perceived trust is the strongest predictor of online satisfaction. Further, trust enhances customer satisfaction which in turn enhances customer loyalty. Since trust is based on overall service quality, e-trust can be controlled by managing all quality dimensions of the e-services experience. The customer experience of quality dimensions such as need fulfillment, security, service responsiveness, and website technical functionality is essential for customer e-loyalty (Gummerus et al., 2004). The determinants responsiveness, contact interactivity, convenience, and customization directly and positively affect e-service quality. The results suggested that e-service quality, e-satisfaction, and e-trust generate e-loyalty but with varying significance for different websites (Arya and Srivastava, 2015).
Berraies et al. (2015), in their study, analyzed the relationship between websites’ functional characteristics and their online trust and customer loyalty. The study revealed four constructs that link websites’ functional elements to online trust and loyalty. The study focused on the four constructs that define websites' functional features and functionalities: quality of information, security/privacy, ease of use, and website design. The study identified three constructs for online trust: competence, benevolence, and integrity; three constructs for customer loyalty: cognitive loyalty, affective loyalty, and conative loyalty. The study revealed that websites’ functional characteristics such as ease of use and Transparency affect online trust among their customers. This influence also affected their e-loyalty levels. The findings pointed to the mediation role of online trust between websites’ functional features and customer loyalty. The results also suggested that e-service providers should focus on the operational and aesthetic attributes of a website. The study also established that website security and privacy are the most important determinants that influence online trust.

Service failures and recovery (SFR) have significant effects on customer loyalty in the e-services context. The study showed that service failure creates adverse effects while service recovery creates positive effects on e-loyalty. In addition, the study also pointed out two other positive possibilities: service failure with satisfactory service recovery and service failure with outstanding service recovery. Those customers who experienced a service failure followed by remarkable recovery showed loyalty behavior, which is higher than if there was no failure. The customers who experienced a service failure followed by only acceptable recovery showed loyalty behavior, which is not different from no failure situation (Sousa and Voss, 2009). Therefore, e-service delivery systems should not only be designed with a robust failure-prevention mechanism but also include an effective mechanism for service recovery.

Joe and Chiu (2008) defined e-loyalty as a concept that refers to the loyalty that individuals can obtain from various sources. The paper proposed that multiple factors such as virtual power status, relational interactions, utility, and feature enhancement can influence an individual’s e-loyalty. These determinants affect e-loyalty indirectly through satisfaction and commitment as mediator variables.

Although many studies have examined the link between cognitive and affective factors in determining e-loyalty, few studies have focused on the role of these factors in e-commerce. The study revealed that e-service quality and e-loyalty are influenced by four key affective factors: emotions, satisfaction, trust, and commitment. (Ranganathan et al., 2013).

In their paper, Al-Ghazali et al. (2015) reviewed the retention models developed and proposed a generic approach towards identifying and assessing determinants of overall satisfaction in the context of post-adoption continuous usage post-use-trust and attitudinal loyalty. The study identified relative advantage, system quality, information quality, service quality as determinants of post-use satisfaction. On the other hand, Othman et al. (2015) investigated the impact of critical online factors e-service quality, e-satisfaction, and e-trust on e-loyalty in the e-services context. The results concluded that e-satisfaction and e-trust are predictors of e-loyalty, whereas e-service quality directly cannot ensure e-loyalty.

Based on the literature review, this study identifies the antecedent factors of e-trust and e-loyalty. The study also identified the e-services experience determinants and conceptualized it as a multi-dimensional construct as functional experience, delivery experience, and relational (Emotional) experience as a value creation process (see Table I).

<table>
<thead>
<tr>
<th>Authors (Year of Publication)</th>
<th>Dimensions and determinants of e-service experience</th>
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<tbody>
<tr>
<td></td>
<td>Functional Experience (Website tangible dimension)</td>
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<tr>
<td>Gummerus et al. (2004)</td>
<td>Need fulfillment, Security, Website technical functionality</td>
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<tr>
<td>Walker and Johnson (2005)</td>
<td>Security, Confidentiality</td>
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<tr>
<td>Joe and Chiu (2008)</td>
<td>Incentive utility, Feature enhancement</td>
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TABLE I: E-SERVICE EXPERIENCE DIMENSIONS
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<td>Swaid and Wigand (2009)</td>
<td>Quality of Information, Usability</td>
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<td>Sousa and Voss (2009)</td>
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<tr>
<td>Ganguli and Roy (2010)</td>
<td>Quality of Information, Technology usage easiness, technology security</td>
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<td>Dai et al. (2011)</td>
<td>Visual Appearance, Customized Preview, Navigation</td>
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<td>(Ranganathan et al., 2013)</td>
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<td>Rufín and Medina (2014)</td>
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<tr>
<td>Rajaobelina et al. (2014)</td>
<td>Quality of Information, Ease of navigation, Website design, and Perceived privacy/security</td>
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<tr>
<td>Ghosh and Barua (2014)</td>
<td>Easiness to operate/ Efficiency, Security</td>
</tr>
<tr>
<td>Berraies et al. (2015)</td>
<td>Quality of Information, Ease of use, Website design, Security/ privacy</td>
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<tr>
<td>Arya and Srivastava (2015)</td>
<td>Contact interactivity</td>
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As reported in Table 1, after analysis and combining the similar components, eighteen determinants of e-service experience identified are categorized to form three dimensions of e-service experience:


The intangible component for e-customer experience (B) Delivery Experience: (7) Reliability, (8) Responsiveness, (9) Assurance, (10) Convenience (11) Accessibility, (12) Timeliness; and the buyer-seller relational component for e-service experience (C) Relational Experience: (13) Customer Service/ Support Quality, (14) Customization/ Personalization, (15) Emotions/Attitudes (16) Transparency, (17) Enjoyment (18) Satisfaction. All the determinants influence, either positively or negatively, on e-service experience dimensions, and all work together to define the e-services experience. Therefore, the following hypotheses were developed for e-service experience:

**H2a:** E-service experience (Functional experience) has a direct and positive effect on e-trust.

**H2b:** E-service experience (Functional experience) has a direct and positive effect on e-loyalty.

**H3a:** E-service experience (Delivery experience) has a direct and positive effect on e-trust.

**H3b:** E-service experience (Delivery experience) has a direct and positive effect on e-loyalty.

**H4a:** E-service experience (Relational experience) has a direct and positive effect on e-trust.

**H4b:** E-service experience (Relational experience) has a direct and positive effect on e-loyalty.

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Role of Personal Characteristics of Users

Rufin and Molina (2014), in their paper, examined the impact of familiarity or experience on the relationship of Transparency (e-service experience) with satisfaction, trust, and continuance of the use. Customer familiarity and experience (expertise) had a positive bias on relationships for experience in terms of use and a negative bias for familiarity due to duration. Therefore, we classified Familiarity and Experience as Expertise and is included in the model as a controlling factor. Al-Hawari (2014) investigated the relationships of e quality (e-service experience) with e-satisfaction and e-loyalty. It tested the relative importance of customer sociability in the relationships between e-quality with e-satisfaction and e-loyalty. The findings confirmed that e-service quality relationships with e-satisfaction and e-loyalty are stronger if the users are an introvert (less social) than an extrovert (more social). Therefore, the following hypotheses were developed for the model:

H5a: E-service experience impact on e-trust is stronger if the users are more experienced and familiar with e-services (Expertise).

H5b: E-service experience impact on e-loyalty is stronger if the users are more experienced and familiar with e-services (Expertise).

H6a: E-service experience impact on e-trust is stronger if the users are an introvert (less social) rather than an extrovert (more social) (Sociability).

H6b: E-service experience impact on e-loyalty is stronger if the users are an introvert (less social) rather than an extrovert (more social) (Sociability)

RESULT & DISCUSSIONS

Proposed Theoretical Framework

Based on the literature review findings, the study proposed a theoretical framework for the construct relationships (see Figure 1). The theory of reasoned action (TRA), propounded by Fishbein & Ajzen (1980), is a theory of the interrelationships among attitudes, intentions, and behavior. TRA suggests that a person's behavioral intention dependent upon the person's attitude about the behavior and the subjective norms. Theory of planned behavior (TPB) by Ajzen (1991) explained that attitude towards behavior, subjective norms, and perceived behavioral control are responsible for an individual's behavioral intentions and actual behaviors. We find from the analysis that these consumer behavior theories supported the proposed theoretical framework. The components of the framework are e-Services intangible variable – Delivery experience & e-services tangible variable -Functional experience (Attitude Towards behavior), Relational experience (subjective norms), Personal characteristics of users (Perceived behavioral Control), e-trust (Behavioural intentions), and e-loyalty (Actual behavior) (see figure 2).
As presented in Figure 3, we see that Information Technology (IT) theory Technology Acceptance Model (TAM) defines how external factors influence the users' acceptance and uses of a technology system (Davis, 1989).

![Figure 3: Variables Influencing User Acceptance and Actual Use of IT Systems](image)

Using the concept of External Variables from TAM into Unified Theory of Acceptance and Use of Technology (UTAUT) Model developed by Venkatesh, Morris, David & Davis (2003), a modified UTAUT is conceptualized for the study (see Figure 4).

![Figure 4: Modified UTAUT Model](image)
As presented in Figure 5, the study developed an integrated theoretical framework with a combination of behavioral theories - Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB), and technology theories - Technology Acceptance Model (TAM), and Unified Theory of Acceptance & Use of Technology (UTAUT) with necessary modifications for e-services context. Dashed arrows represent additional relationships conceptualized based on a literature review that suggested that actual purchase behavior may happen directly without attitude formation due to situational factors.

**Figure 5: Integrated Theoretical Framework**

**Conceptual Model**
Based on literature review findings, hypotheses development, and proposed theoretical framework,
we present a conceptual model that integrates technology perspective and behavioral perspective (see figure 6).
CONCLUSIONS

Theoretical Contributions
This paper contributed to the literature since it offered a new perspective on the e-services experience by integrating behavioral and technology perspectives. The paper integrated the widely accepted attitude formation theories in consumer behavior (TRA, TPB) and Information Technology theories (TAM, UTAUT) for building the proposed theoretical framework and conceptual model. The analysis provided an increase in the number of variables and determinants to construct a services experience model for the e-services context. The model's particular contribution considers both the cognitive and affective aspects of the construct's relationships. The paper also considered relational experience as one of the dimensions of e-service experience. The influence of personal characteristics, such as sociability and expertise, are considered as control factors for e-service experience.

Managerial contributions
The paper made a comprehensive investigation and included several new variables and their interrelationships for e-services experience with e-trust and e-loyalty, which will help practitioners build digital marketing strategies for long-term buyer-seller relationships. The relationships given in the model had greater validity since it considered a wide variety of variables (covering tangible and intangible experience and credence properties) and developed a conceptual model for e-services experience, which will help managers work out improvements in the e-services experience of customers.

Research limitations and future research directions
The paper is limited to the literature review, a theoretical framework, conceptual model, and hypotheses development. An empirical analysis using Structural Equation Modelling (SEM) testing for validity of the conceptual model is a future research direction. A similar conceptual study can be carried out for online services where the purchase process starts online, but service delivery is offline to broaden the understanding and generalization of the conceptual model. The paper established that all the eighteen determinants of e-services experience in the context of e-services combine into four dimensions to form an overall e-services experience. Future studies can develop a model where the impact of individual determinants directly and indirectly on e-trust and e-loyalty can be conceptualized and empirically tested. The study can also ascertain the interrelationships and order of importance of these determinants. Statistical testing can also be carried out to determine the relative importance of the e-service experience dimensions—statistical analysis to establish correlations (if any) amongst the determinants. Cost/Benefit analysis of the determinants can be carried out to enable Managers to prioritize the determinants. The study can include more individual factors such as gender, age, emotional stability, and customer openness as control variables to improve its generalizability.

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