

# Determinants of Electronic Customer Relationship Management (E-CRM) Systems in the Nepalese Insurance Sector

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## *Abstract*

E-commerce has revolutionized the global shopping landscape, especially among younger generations, by providing unprecedented convenience and accessibility. This shift has transformed traditional retail, enabling consumers to easily find, compare, and purchase products online. The internet has created a centralized platform that brings together competitors and consumers, opening new avenues for product and service promotion. Customer relationships are crucial in customer-focused marketing, with Customer Relationship Management (CRM) leveraging customer data to enhance promotions. The evolution from e-CRM to CRM highlights the growing emphasis on customer relationships to establish competitive power. This study investigates the impact of trust, privacy, reliability, responsiveness, and customer satisfaction on the success of electronic customer relationship management (E-CRM) systems in the Nepalese insurance sector. Based on primary data from 393 respondents in the Nepalese insurance sector, the study employs descriptive statistics, correlations, and regression analysis. Data are collected using Google Forms. The results show that privacy, reliability, responsiveness, trust, and customer satisfaction are positively correlated with the success of E-CRM systems. Higher levels of these factors lead to greater success in E-CRM systems within the Nepalese insurance sector.

**Keywords:** *Privacy, Reliability, Responsiveness, Trust, Customer Satisfaction*

## **1. Introduction**

Electronic Customer Relationship Management (E-CRM) has emerged as a transformative force, revolutionizing the global shopping landscape, particularly among the younger generation (Kim & Ammeter, 2018). The convenience and accessibility of e-commerce have significantly altered the traditional retail paradigm, enabling consumers to easily find, compare, and purchase various products online. Khing et al. (2019) noted that the internet creates a centralized platform that brings together competitors and consumers, opening new avenues for product and service promotion. Saarijarvi et al. (2013) emphasized that customer relationships are central in customer-focused marketing, with Customer Relationship Management (CRM) involving the collection and strategic use of customer data to enhance product and service promotion. The survival of CRM is linked to ongoing modifications in the marketing environment and the internet, with organizations prioritizing customer relationships as crucial for establishing competitive power. The transition from e-CRM to CRM reflects evolving working methods globally.

Service quality significantly impacts E-CRM success, influencing perceived quality, consumer

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loyalty, and customer satisfaction (Rust & Zahorik, 2012). Trust is essential for E-CRM initiatives, as it builds strong, high-quality relationships that form the cornerstone of stable and collaborative business interactions (Mahmoud et al., 2018; Dwyer et al., 1987; Kundu & Datta, 2015). Internet-based transactions have become significant in developing nations, with dedicated CRM software applications increasingly deployed to extend or build customer relationships (Mang'unyi et al., 2018). New marketing tactics and tools, facilitated by internet technologies, help firms convert, attract, and retain customers (Harrigan et al., 2012). The internet and web technologies provide representatives with functionality, information, and process management in CRM, allowing organizations to achieve the highest value from their e-business assets (Simons et al., 2009). E-CRM involves creating interactions through individualization to improve customer relationships.

In Nepal, insurance companies often lack essential customer information, such as their desires and choices (Pant & KC, 2017). However, implementing E-CRM strategies can directly lead to increased customer satisfaction, enhancing customer experience and loyalty in the Nepalese insurance market (Dhakal & Kaffle, 2022). Addressing data privacy concerns is crucial for insurance providers in Nepal to leverage E-CRM successfully for customer engagement and growth (Adhikari & Paudel, 2023).

Customer Relationship Management (CRM) is essential for attracting new customers, retaining existing ones, and maximizing their long-term value. CRM enables businesses to identify their most lucrative customers and prospects and allocate resources to strengthen these relationships through personalized marketing, pricing, and tailored service delivered via various sales channels (Dhingra & Dhingra, 2013). Studies have demonstrated the positive impact of Electronic Customer Relationship Management (E-CRM) in companies and organizations, highlighting increased customer loyalty, sales growth, improved customer service, personalization of customer relationships, marketing cost savings, and increased market awareness (Harrigan et al., 2012).

Parasuraman et al. (1985) found that responsiveness is a key factor in organizational readiness to provide services to customers, while Park and Kim (2003) identified the importance of protecting personal information for establishing long-term customer relationships in online shopping. Westin (2017) emphasized the need for legal safeguards to ensure privacy in a digital society. Wahab (2009) highlighted the role of E-CRM in enhancing customer satisfaction through timely and personalized communication, and Gefen (2020) discussed the importance of transparent communication in building trust.

Maharjan (2012) found a positive association between trust and customer satisfaction, and Biswakarma (2015) revealed a significant relationship between privacy and E-CRM. Pant and Bhandari (2020) emphasized the importance of tailoring online services and communication to individual customer needs for Nepalese insurance providers. Despite these findings, there is a lack of recent empirical evidence on E-CRM success in Nepal's insurance sector.

This study focuses to understand how trust, privacy, reliability, responsiveness and customer satisfaction influence the success of E-CRM systems in the Nepalese insurance sector. By identifying

these factors, insurance companies can better leverage E-CRM strategies to enhance customer engagement and loyalty. Additionally, addressing data privacy concerns and improving service quality are crucial for adapting to the evolving digital landscape and meeting customer expectations. This research provides insights that can help Nepalese insurance companies effectively implement E-CRM systems, ultimately leading to improved customer relationships and competitive advantage.

## 2. Literature Review

Udo (2001) highlighted privacy and security concerns as key barriers to online transactions, emphasizing their importance in building trust and fostering CRM success. Fjermestad and Romano and Fjermestad (2003) explored ECRM, identifying usability and resistance as major challenges that impact its effectiveness, with trust and responsiveness as critical components. Ngai and Wat (2005) conducted a comprehensive analysis of CRM literature, categorizing topics like CRM management, strategy, and software, with trust and service quality playing pivotal roles in CRM outcomes.

Herington and Waven (2007) examined the influence of online service quality on e-loyalty in the banking sector, finding that service quality directly impacts e-loyalty but not customer delight or trust. Wahab (2009) investigated the evolution of Malaysia's banking industry, focusing on how CRM performance mediates the relationship between trust and electronic banking adoption, with customer satisfaction acting as a key mediator. Kassim and Abdullah (2010) analyzed the relationship between service quality, customer satisfaction, trust, and loyalty in e-commerce, showing that better website usability enhances customer satisfaction and loyalty, with cultural differences playing a role.

Krause and Horvitz (2010) explored online privacy from a utility-theoretic perspective, emphasizing the need for data transparency and regulation to build trust in e-commerce. Dhingra and Dhingra (2012) examined ECRM in the banking sector, highlighting the importance of trust, security, and privacy in maintaining customer relationships. Kundu and Datta (2015) demonstrated that trust mediates the relationship between e-service quality and customer satisfaction in internet banking, underscoring the importance of trust in retaining customers.

Durai et al. (2017) explored ECRM in e-commerce, concluding that addressing usability and resistance is crucial for maximizing customer satisfaction. PromTep (2017) studied mobile banking service quality, finding that trust, enjoyment, and social factors significantly influence relationship quality, underscoring the need for user-friendly mobile platforms. Mishra (2018) analyzed customer satisfaction with ECRM systems in the Nepalese insurance sector, emphasizing the importance of trust and privacy in sectors dealing with sensitive data.

Rostamzadeh et al. (2020) proposed a model for ECRM success, identifying trust, service quality, privacy, and customer satisfaction as critical factors. Pant and Bhandari (2020) focused on specific aspects of ECRM that resonate with Nepalese insurance customers, such as responsiveness and ease of use, and their impact on customer satisfaction. Aryal et al. (2021) found that robust, user-friendly ECRM platforms significantly enhance customer satisfaction in online insurance services in Nepal.

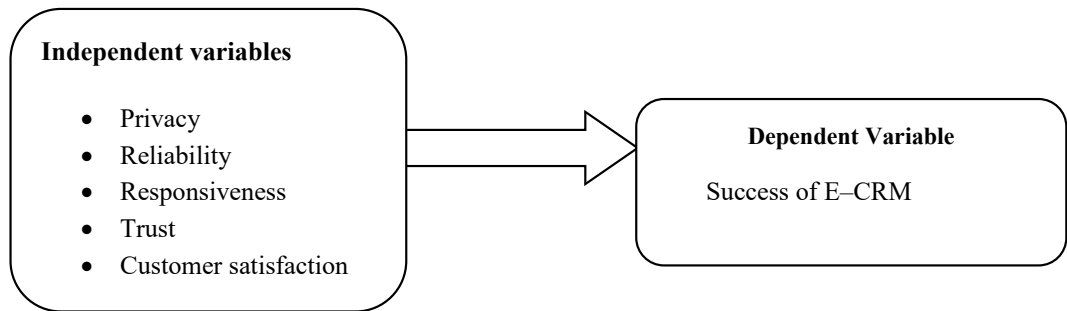
Shrestha and Shrestha (2021) highlighted trust and security as top concerns for Nepalese customers

using online insurance platforms, influencing their attitudes toward ECRM. Tasya and Dudi (2021) explored the effects of ECRM and brand trust on customer satisfaction and loyalty in Pixy Cosmetic products, finding a strong link between these factors. Dhakal and Kafle (2022) analyzed the impact of ECRM implementation on customer satisfaction in the Nepalese insurance sector, concluding that active ECRM implementation can significantly enhance customer satisfaction and loyalty.

### 3. Conceptual Framework and Definition of Variables

This study examines the success of Electronic Customer Relationship Management (E-CRM) as the dependent variable. The independent variables considered are trust, privacy, reliability, responsiveness, and customer satisfaction. The objective is to determine how these factors influence E-CRM. Figure 1 illustrates the conceptual framework, depicting the relationships between the dependent and independent variables.

**Figure 1:** Conceptual Framework



#### Privacy

Privacy is crucial for the success of E-CRM systems, especially in building trust with customers. Park and Kim (2003) and Eid (2011) identified the protection of personal information as essential for establishing long-term customer relationships. Westin (2017) emphasized the importance of legal safeguards to ensure privacy, indicating that customers' sense of security regarding their personal information is vital for their engagement with E-CRM systems.

#### Reliability

Reliability in E-CRM refers to the system's consistency and dependability, ensuring accurate and trustworthy results. Nour El-Din (2015) found that reliability in banking services includes accurate calculations and proper record-keeping. Wahab (2009) linked CRM performance to the continued use of electronic banking services.

#### Responsiveness

Responsiveness is the ability to provide timely and relevant feedback in online interactions. Rust and Zahorik (2012) and Pant and Bhandari (2020) highlighted the importance of responsiveness in enhancing perceived service quality, consumer loyalty, and customer satisfaction. Gulati et al.

(2012) and Naim (2022) emphasized that quick and effective responsiveness through E-CRM systems positively impacts brand reputation and customer satisfaction.

### **Trust**

Trust is fundamental in shaping customer relationships in E-CRM systems. Gefen (2020) and Kim and Ammeter (2018) explored the role of trust in online interactions, noting that features like secure payment gateways and robust data protection measures build customer trust. Zhang et al. (2020) discussed the interconnected relationships among perceived value, satisfaction, and e-trust, underscoring the importance of trust in E-CRM.

### **Customer Satisfaction**

Customer satisfaction is crucial for the success of E-CRM systems. Wahab (2009) found that E-CRM facilitates better communication and enhances customer retention. Rasham (2019) noted that customer satisfaction is influenced by the efficiency, responsiveness, and effectiveness of E-CRM initiatives. Romano and Fjermestad (2003) concluded that customer satisfaction positively impacts the success of E-CRM systems.

### **E-CRM**

Electronic Customer Relationship Management (E-CRM) refers to strategies that leverage electronic channels like the internet and email to manage and improve customer relationships. Trust, privacy, service quality, and customer satisfaction are critical factors influencing E-CRM effectiveness. Research shows that satisfied customers are more likely to engage with E-CRM systems, such as online policy management and claims filing in the insurance sector, leading to increased loyalty, retention, and positive recommendations. Trust and privacy concerns are significant determinants of customers' willingness to engage with E-CRM systems, as highlighted by Romano and Fjermestad (2003) and Winer (2001). Dyche (2001) categorized E-CRM into operational and analytical types, emphasizing the importance of these systems in modern marketing.

## **4. Research Methodology**

This study uses both descriptive and causal-comparative research designs to investigate how trust, privacy, service quality, and customer satisfaction impact the success of Electronic Customer Relationship Management (E-CRM) systems in the Nepalese insurance sector. The descriptive research design helps gather data about the success of E-CRM systems, while the causal-comparative design establishes cause-and-effect relationships between dependent and independent variables. Primary data are collected through online consumer surveys, using a structured questionnaire with sections for demographic information and Likert scale/multiple choice questions. Data are analyzed with SPSS, employing both descriptive and inferential statistics, including frequencies, means, correlation and regression analysis, to measure the success of E-CRM systems.

The study's sample consists of 393 respondents from the Nepalese insurance sector, selected through convenience sampling. The least square regression model has used to determine the relationships between E-CRM success and factors like privacy, reliability, responsiveness, trust, and customer

satisfaction. Privacy, reliability, responsiveness, trust, and customer satisfaction are each measured using a 5-point Likert scale. Items includes statements on privacy protection, reliability of services, responsiveness of ECRM operators, trust in secure payment systems, and overall satisfaction with services. The results are analyzed to understand how these factors contribute to the effectiveness and adoption of E-CRM systems in the insurance sector.

This study employs a least squares regression model to examine the impact of trust, privacy, service quality, and customer satisfaction on the success of electronic customer relationship management (E-CRM) systems in the Nepalese insurance sector. The model is specified as follows:

$$E\text{-CRM} = \beta_0 + \beta_1P + \beta_2R + \beta_3RP + \beta_4T + \beta_5CS + e$$

Where: E-CRM = Electronic Customer Relationship Management; P = Privacy; R = Reliability; RP = Responsiveness; T = Trust; CS = Customer Satisfaction;  $\beta_0$  = Intercept; e = Error term;  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ , and  $\beta_5$  are the coefficients of the explanatory variables to be estimated.

In this study, Cronbach's alpha is used to test the reliability of the primary data. This measure evaluates the reliability of different categories by calculating the number of test items and the average inter-correlation among them. Cronbach's alpha estimates how much variation in scores is due to chance or random errors. A coefficient of 0.7 or higher is generally considered acceptable, indicating good construct reliability. Since the Cronbach's alpha for each variable exceeds 0.7, there is internal consistency among the statements for the respective variables. Therefore, the data are considered reliable for the study.

## 5. Results

This section presents respondents' profile, responses on privacy, reliability, responsiveness, trust, customer satisfaction and success of electronic customer relationship management.

### Respondents' Profile

The following section presents the respondents' profiles, detailing their personal characteristics and survey results. The profile includes demographics such as gender, age, educational qualifications, employment status, monthly family income, types of insurance services used, frequency of service usage, and preferred online service mediums. Understanding these demographic characteristics is important to analyze the behavior of clients in the insurance sector. Thus, this section outlines the demographic attributes of respondents from various insurance companies, as shown in Table 1.

#### *Demographic Profile of Respondents*

The respondents were asked to provide information across eight demographic categories to complete their demographic profile. These categories include gender, age, academic qualification, employment status, monthly family income, types of insurance services used, frequency of service usage, and preferred online service medium. The distribution of the collected sample based on these demographics is presented below. The characteristics of the respondents play a significant role in influencing the results.

**Table 1:**Demographic Statistics

| Respondents Character            | Number of Responses | Percentage |
|----------------------------------|---------------------|------------|
| <b>Gender</b>                    |                     |            |
| Male                             | 240                 | 61.1       |
| Female                           | 153                 | 38.9       |
| <b>Total</b>                     | <b>393</b>          | <b>100</b> |
| <b>Age</b>                       |                     |            |
| Below 25                         | 33                  | 8.4        |
| 26-35                            | 231                 | 58.8       |
| 36-45                            | 120                 | 30.5       |
| 46- above                        | 9                   | 2.3        |
| <b>Total</b>                     | <b>393</b>          | <b>100</b> |
| <b>Academic Qualification</b>    |                     |            |
| Intermediate/ +2                 | 51                  | 13.0       |
| Bachelor's degree                | 222                 | 56.5       |
| Master's degree                  | 114                 | 29.0       |
| M. Phil./ PhD                    | 6                   | 1.5        |
| <b>Total</b>                     | <b>393</b>          | <b>100</b> |
| <b>Work Status</b>               |                     |            |
| Student                          | 27                  | 6.9        |
| Housewife                        | 18                  | 4.6        |
| Private Job                      | 228                 | 58         |
| Government Job                   | 111                 | 28.2       |
| Unemployed (except students)     | 9                   | 2.3        |
| <b>Total</b>                     | <b>393</b>          | <b>100</b> |
| <b>Monthly Family Income</b>     |                     |            |
| 30000-60000                      | 30                  | 7.6        |
| 60000-90000                      | 237                 | 60.3       |
| 90000-120000                     | 114                 | 29         |
| 120000 and above                 | 12                  | 3.1        |
| <b>Total</b>                     | <b>393</b>          | <b>100</b> |
| <b>Types of Insurance</b>        |                     |            |
| Life Insurance                   | 228                 | 58         |
| Non-Life insurance               | 57                  | 14.5       |
| Both                             | 108                 | 27.5       |
| <b>Total</b>                     | <b>393</b>          | <b>100</b> |
| <b>Preferred Online Service</b>  |                     |            |
| Website                          | 270                 | 68.7       |
| Application                      | 102                 | 26         |
| Telephone                        | 12                  | 3.1        |
| Others                           | 9                   | 2.3        |
| <b>Total</b>                     | <b>393</b>          | <b>100</b> |
| <b>Frequency of Service Used</b> |                     |            |
| Below 3 times                    | 165                 | 42         |
| 3-6 times                        | 192                 | 48.9       |
| 6-9 times                        | 21                  | 5.3        |
| above 9 times                    | 15                  | 3.8        |
| <b>Total</b>                     | <b>393</b>          | <b>100</b> |

Source: Field Survey 2024

Table 1 provides a comprehensive demographic profile of the respondents based on eight categories: gender, age, academic qualification, employment status, monthly family income, types of insurance services used, frequency of service usage, and preferred online service medium. Among the 393 respondents, 61.1% are male and 38.9% are female. The majority, 58.8%, are aged 26-35, followed by 30.5% aged 36-45, 8.4% below 25, and 2.3% above 46. In terms of academic qualifications, 56.5% hold a bachelor's degree, 29% have a master's degree, 13% have an intermediate or +2 qualification, and 1.5% have an M. Phil./PhD. Employment status shows that 58% are in private jobs, 28.2% in government jobs, 6.9% are students, 4.6% are housewives, and 2.3% are unemployed (excluding students).

Regarding monthly family income, 60.3% of respondents earn between 60,000 and 90,000, 29% earn between 90,000 and 120,000, 7.6% earn between 30,000 and 60,000, and 3.1% earn above 120,000. The types of insurance held show 58% have life insurance, 14.5% have non-life insurance, and 27.5% have both. Preferred online service mediums are websites (68.7%), applications (26%), telephone (3.1%), and others (2.3%). Frequency of service usage is as follows: 48.9% use services 3-6 times, 42% below 3 times, 5.3% use them 6-9 times, and 3.8% use them more than 9 times.

### **Respondents' Perception on Privacy**

Most respondents (83.97 percent) agree that it is necessary for the organization's website to provide a privacy statement to ensure customer information remains confidential. However, 10.69 percent disagree, and 5.63 percent are neutral. Similarly, 84.73 percent of respondents believe that third-party verification, such as a seal of approval, is essential for verifying the website's authenticity. In contrast, 9.16 percent disagree, and 6.11 percent remain neutral. Additionally, 68.70 percent of respondents agree that the organization's online service does not share customers' personal information with other sites. Some (9.92 percent) disagree, while 21.37 percent are neutral.

Furthermore, 70.23 percent of respondents think it is crucial for the website to provide a comprehensive privacy statement to assure customers of the confidentiality of their information. Conversely, 9.16 percent disagree, and 20.61 percent are neutral. Moreover, 81.68 percent emphasize the importance of third-party verification, like a seal of approval, to authenticate the website's credibility and build customer trust. Some (9.16 percent) disagree, and the remaining 9.16 percent are indifferent. The mean value for job stress ranges from 3.83 to 4.34. The most significant observation regarding user experience is the emphasis on third-party verification to authenticate the website, with a mean value of 4.34. The weighted average mean scale for user experience is 3.83, indicating that respondents believe the online service does not share customers' personal information with other sites.

### **Respondents' Perception on Reliability**

The majority of respondents (83.97 percent) agree that they are confident the insurance service will be available when needed in an emergency. However, 12.21 percent disagree, and 3.82 percent are neutral on this statement. Similarly, 87.02 percent of respondents believe their information will be accurately transmitted through the ECRM. In contrast, 6.11 percent disagree, and 6.87 percent are neutral. Likewise, 87.02 percent of respondents are satisfied with the quality of the sound and clarity



of communication on the ECRM. Some (8.40 percent) disagree, while 4.58 percent are neutral.

Additionally, 62.60 percent trust that the customer support team will promptly assist them during unforeseen emergencies, while 32.06 percent disagree and 5.34 percent remain neutral. Furthermore, 61.83 percent are reassured that the ECRM system will securely and efficiently handle the transmission of their data, ensuring its accuracy and reliability. In comparison, 33.59 percent disagree, and 4.58 percent are indifferent.

### **Respondents' Perception on Responsiveness**

It is found that the majority of respondents (87.79 percent) agree that "The ECRM operators are always quick to answer my calls and provide assistance." Some respondents (6.87 percent) disagree, while 5.3 percent are neutral. Similarly, most respondents (83.21 percent) agree that they are satisfied with the time it takes for the ECRM to dispatch emergency services. However, 9.92 percent disagree, and 6.87 percent remain neutral. Likewise, 67.94 percent of respondents feel that ECRM operators are genuinely concerned about their well-being and want to help in an emergency. In contrast, 19.85 percent disagree, and 12.21 percent are neutral.

Additionally, 45.80 percent of respondents are satisfied with the efficiency of the ECRM in dispatching emergency services, appreciating the promptness and reliability of their response time. Some (9.16 percent) disagree, while 45.04 percent are neutral. Moreover, 45.80 percent appreciate the genuine care and swift action demonstrated by ECRM operators, ensuring prompt assistance. However, 11.45 percent disagree, and 42.75 percent are indifferent. The mean value for job stress ranges from 3.45 to 4.46. The most significant observation regarding user experience is that "The ECRM operators are always quick to answer my calls and provide assistance," with a mean value of 4.46. The weighted average mean scale for user experience is 3.45, indicating reassurance that the ECRM system securely and efficiently handles data transmission, ensuring its accuracy and reliability.

### **Respondents' Perception on Trust**

The majority of respondents (49.62 percent) believe that the organization should always send a confirmation of secure payment and transmission. However, 45.80 percent disagree, and 4.58 percent are neutral. Similarly, 85.50 percent of respondents feel comfortable providing sensitive information, such as credit card or debit card numbers, for online payment. In contrast, 9.16 percent disagree, and 5.34 percent are neutral. Likewise, 46.56 percent of respondents think the terms and conditions laid out by the organization are customer-friendly and fair. However, 48.85 percent disagree, and 4.58 percent are neutral.

Additionally, 45.80 percent believe it is essential for the organization to consistently send confirmations of secure payment and transmission to ensure transparency and reinforce trust in their online transaction processes. Some (45.04 percent) disagree, while 9.16 percent are neutral. Moreover, 88.55 percent of respondents feel at ease when sharing sensitive information, such as credit card or debit card details, for online payments, trusting the organization's robust security measures to safeguard their data. In contrast, 6.87 percent disagree, and 4.58 percent are neutral.

The mean value for trust ranges from 2.96 to 4.21. The most significant observation regarding user experience is that respondents feel at ease when sharing sensitive information for online payments, trusting the organization's robust security measures, with a mean value of 4.21. The weighted average mean scale for user experience is 2.96, indicating that trust is reassured by the ECRM system's secure and efficient handling of data transmission, ensuring accuracy and reliability.

### **Respondents' Perception on Customer Satisfaction**

The majority of respondents (63.36 percent) are satisfied with the services provided by the organization. However, 32.06 percent disagree, and 4.58 percent are neutral. Similarly, 34.35 percent of respondents are satisfied with the prompt service response from employees online. In contrast, 46.56 percent disagree, and 19.08 percent are neutral. Likewise, 86.26 percent of respondents are satisfied with the financial services advice provided online. Some (6.87 percent) disagree, while 6.87 percent remain neutral.

Additionally, 32.81 percent of respondents believe that the overall online service quality provided by the organization is excellent. However, 47.33 percent disagree, and 19.85 percent are neutral. Moreover, 32.06 percent are fully satisfied with the response from the customer service department. In comparison, 64.12 percent disagree, and 3.82 percent are indifferent. The mean value for trust ranges from 2.40 to 4.15. The most significant observation regarding user experience is satisfaction with the financial services advice provided online, with a mean value of 4.15. The weighted average mean scale for user experience is 2. This indicates that customer satisfaction will securely and efficiently handle the transmission of data, ensuring its accuracy and reliability.

### **Respondents' Perception on E-CRM**

The majority of respondents (82.44 percent) agree that complaints encourage them to share problems when they arise. However, 13.74 percent disagree, and 3.82 percent are neutral. Similarly, 32.82 percent of respondents believe that their needs are reviewed and addressed individually when possible. In contrast, 7.63 percent disagree, and 59.54 percent are neutral. Likewise, 84.73 percent of respondents think the organization has the right technical personnel to provide support for using computer technology in building customer relationships. Some (8.40 percent) disagree, while 6.87 percent are neutral.

Moreover, 86.26 percent believe the organization has the appropriate software to address customer complaints swiftly. In comparison, 7.63 percent disagree, and 6.11 percent are indifferent. The mean value for trust ranges from 3.22 to 4.41. The most significant observation regarding user experience is that complaints promote and encourage sharing problems when they arise, with a mean value of 4.11. The weighted average mean scale for user experience is 3.22, indicating that the E-CRM system securely and efficiently handles data transmission, ensuring accuracy and reliability.

### **Correlation Analysis**

Table 2 shows the computation of correlation coefficients matrix of the effect of trust, privacy, service quality, and customer satisfaction on the success of electronic customer relationship management

(E-CRM) systems in Nepalese insurance sector.

**Table 2:** Correlation Matrix

*The table shows the coefficients between the dependent and independent variables, based on 393 observations. The dependent variable is E-CRM (Electronic Customer Relationship Management). The independent variables are Privacy (P), Reliability (R), Responsiveness (RP), Trust (T), and Consumer Satisfaction (CS).*

| Variables | Mean   | S. D. | ECRM    | P       | R       | RP      | T       | CS |
|-----------|--------|-------|---------|---------|---------|---------|---------|----|
| ECRM      | 3.931  | 0.812 | 1       |         |         |         |         |    |
| P         | 4.024  | 0.825 | 0.792** | 1       |         |         |         |    |
| R         | 3.904  | 0.853 | 0.901** | 0.695** | 1       |         |         |    |
| RP        | 3.911  | 0.801 | 0.402** | 0.041   | 0.586** | 1       |         |    |
| T         | 0.3605 | 1.030 | 0.380** | 0.191** | 0.489** | 0.768** | 1       |    |
| CS        | 3.202  | 0.929 | 0.811** | 0.599** | 0.799** | 0.689** | 0.645** | 1  |

*Note: The asterisk signs (\*\*) and (\*) indicate that the results are significant at one percent and five percent levels respectively.*

The Table 2 presents a detailed results at the correlation coefficients between Electronic Customer Relationship Management (E-CRM) and independent variables: Privacy (P), Reliability (R), Responsiveness (RP), Trust (T), and Consumer Satisfaction (CS). The data is derived from 393 observations, ensuring a robust sample size for the analysis. Each variable is accompanied by its mean and standard deviation, offering insights into their central tendencies and variability within the dataset.

The mean values of the variables in the study range from 0.3605 to 4.024. Privacy (P) has the highest mean value at 4.024, indicating that on average, respondents rate their privacy concerns highly. The variable Trust (T), however, has the lowest mean at 0.3605, suggesting a lower average score in trust-related responses. The standard deviations vary between 0.801 and 1.030, reflecting the spread of the responses. Trust (T) has the highest standard deviation of 1.030, showing significant variability in how trust is perceived among respondents, while Responsiveness (RP) has the lowest at 0.801, indicating more consistent responses in terms of service responsiveness.

The correlation coefficients indicate the strength and direction of the relationships between E-CRM and the independent variables. A higher correlation coefficient implies a stronger relationship. Privacy exhibits a strong positive correlation with E-CRM (0.792\*\*). This high correlation suggests that as the perceived privacy measures of the organization improve, the effectiveness of E-CRM also significantly increases. Similarly, reliability shows the strongest correlation with E-CRM at 0.901\*\*, indicating that as reliability improves, the effectiveness of E-CRM also increases significantly.

highlighting that reliable services are crucial for effective E-CRM. This means that the more reliable the service, the better the E-CRM performance.

With a correlation coefficient of 0.402\*\*, Responsiveness shows a moderate positive relationship with E-CRM. This indicates that while responsiveness is important, it has a relatively lesser impact on E-CRM compared to privacy and reliability. Likewise, Trust has a moderate positive correlation with E-CRM at 0.380\*\*. Despite having a lower mean, the relationship indicates that increasing trust levels can moderately enhance E-CRM performance. Further, Consumer Satisfaction has a strong positive correlation with E-CRM (0.811\*\*). This suggests that higher consumer satisfaction levels are strongly associated with more effective E-CRM systems.

The significance of these correlations is denoted by asterisks. Correlations marked with two asterisks (\*\*) are significant at the 1% level, indicating a very high level of statistical confidence. This means there is less than a 1% chance that these correlations are due to random variation. Such high significance levels underscore the reliability and importance of these relationships in the context of E-CRM. Hence, the correlation matrix underscores the critical importance of privacy, reliability, responsiveness, trust, and consumer satisfaction in the effectiveness of Electronic Customer Relationship Management. The strong positive correlations, particularly with privacy, reliability, and consumer satisfaction, highlight these factors as key drivers of successful E-CRM systems. The statistical significance of these relationships further reinforces the robustness of the findings, suggesting that enhancing these independent variables can lead to substantial improvements in E-CRM performance.

### **Regression Analysis**

In this analysis, privacy, reliability, responsiveness, trust, and customer satisfaction are considered independent variables, while E-CRM (Electronic Customer Relationship Management) is the dependent variable. The regression results, detailing the relationships of these independent variables with E-CRM, are shown in Table 3.

### **Regression Results**

The regression analysis presented in Table 3 examines the relationship between Electronic Customer Relationship Management (E-CRM) and several independent variables: Privacy (P), Reliability (R), Responsiveness (RP), Trust (T), and Consumer Satisfaction (CS). The analysis is based on 393 observations, using the model  $E\text{-CRM} = \beta_0 + \beta_1P + \beta_2R + \beta_3RP + \beta_4T + \beta_5CS + e$ .

In Model 1, the intercept is 2.702 with a regression coefficient for Privacy (P) of 0.399, both significant at the 1% level. The adjusted R-squared value is 0.156, indicating that Privacy alone explains 15.6% of the variability in E-CRM. The standard error of the estimate (SEE) is 0.302, and the F-value is 21.904, demonstrating the model's overall significance. Model 2 focuses on Reliability (R), with an intercept of 1.812 and a regression coefficient of 0.631, both significant at the 1% level. This model has an adjusted R-squared value of 0.404, suggesting that Reliability accounts for 40.4% of the variability in E-CRM. The SEE is 0.301, and the F-value is 77.151. In Model 3, Responsiveness (RP) is the independent variable, with an intercept of 1.504 and a regression coefficient of 0.714, both

significant at the 1% level. The adjusted R-squared value is 0.417, indicating that Responsiveness explains 41.7% of the variability in E-CRM. The SEE is 0.311, and the F-value is 85.307.

The results are derived from a linear regression model based on 393 observations. The model used is  $E\text{-CRM} = \beta_0 + \beta_1P + \beta_2R + \beta_3RP + \beta_4T + \beta_5CS + e$ , where E-CRM (Electronic Customer Relationship Management) is the dependent variable. The independent variables in the model are Privacy (P), Reliability (R), Responsiveness (RP), Trust (T), and Consumer Satisfaction (CS).

**Table 3:** Regression Output

| Models | Intercepts | Regression coefficients |           |           |            |            | Adj. R <sup>2</sup> | SEE   | F-value |
|--------|------------|-------------------------|-----------|-----------|------------|------------|---------------------|-------|---------|
|        |            | P                       | R         | RP        | T          | CS         |                     |       |         |
| 1      | 2.702      | 0.399                   |           |           |            |            | 0.156               | 0.302 | 21.904  |
|        | (6.142)**  | (4.602)**               |           |           |            |            |                     |       |         |
| 2      | 1.812      |                         | 0.631     |           |            |            | 0.404               | 0.301 | 77.151  |
|        | (5.298)**  |                         | (8.805)** |           |            |            |                     |       |         |
| 3      | 1.504      |                         |           | 0.714     |            |            | 0.417               | 0.311 | 85.307  |
|        | (4.342)**  |                         |           | (9.306)** |            |            |                     |       |         |
| 4      | 1.512      |                         |           |           | 0.733      |            | 0.476               | 0.314 | 101.911 |
|        | (4.688)**  |                         |           |           | (10.105)** |            |                     |       |         |
| 5      | 1.423      |                         |           |           |            | 0.744      | 0.496               | 0.291 | 109.704 |
|        | (4.241)**  |                         |           |           |            | (10.453)** |                     |       |         |
| 6      | 1.703      | 0.047                   | 0.615     |           |            |            | 0.447               | 0.304 | 39.503  |
|        | (4.143)**  | (0.507)                 | (6.968)** |           |            |            |                     |       |         |
| 7      | 0.987      | 0.003                   | 0.376     | 0.441     |            |            | 0.519               | 0.289 | 38.102  |
|        | (2.403)*   | (0.022)                 | (3.871)** | (4.843)** |            |            |                     |       |         |
| 8      | 0.859      | 0.026                   | 0.251     | 0.291     | 0.354      |            | 0.598               | 0.287 | 33.102  |
|        | (2.174)*   | (0.304)                 | (2.507)*  | (2.661)** | (3.191)**  |            |                     |       |         |
| 9      | 0.583      | 0.007                   | 0.177     | 0.123     | 0.263      | 0.351      | 0.667               | 0.251 | 30.619  |
|        | (1.503)    | (0.072)                 | (1.843)   | (1.078)   | (2.384)*   | (3.277)**  |                     |       |         |

Notes:

- i. Figures in parenthesis are t-values
- ii. The asterisk signs (\*\*) and (\*) indicate that the results are significant at one percent and five percent level respectively.
- iii. Electronic customer relationship management is dependent variable.

Model 4 examines Trust (T), with an intercept of 1.512 and a regression coefficient of 0.733, both significant at the 1% level. This model has an adjusted R-squared value of 0.476, showing that Trust explains 47.6% of the variability in E-CRM. The SEE is 0.314, and the F-value is 101.911. Model 5 focuses on Consumer Satisfaction (CS), with an intercept of 1.423 and a regression coefficient of 0.744, both significant at the 1% level. The adjusted R-squared value is 0.496, indicating that Consumer Satisfaction explains 49.6% of the variability in E-CRM. The SEE is 0.291, and the F-value is 109.704. Model 6 combines Privacy (P) and Reliability (R), with an intercept of 1.703. The regression coefficients for Privacy and Reliability are 0.047 and 0.615, respectively, with Reliability being significant at the 1% level. The adjusted R-squared value is 0.447, the SEE is 0.304, and the F-value is 39.503.

Model 7 includes Privacy (P), Reliability (R), and Responsiveness (RP), with an intercept of 0.987. The regression coefficients are 0.003, 0.376, and 0.441, respectively, with Reliability and Responsiveness significant at the 1% level. The adjusted R-squared value is 0.519, the SEE is 0.289, and the F-value is 38.102. Model 8 adds Trust (T) to the previous model, with an intercept of 0.859. The regression coefficients are 0.026 for Privacy, 0.251 for Reliability, 0.291 for Responsiveness, and 0.354 for Trust, with significant values for Reliability, Responsiveness, and Trust. The adjusted R-squared value is 0.598, the SEE is 0.287, and the F-value is 33.102. Model 9 incorporates all independent variables, with an intercept of 0.583. The regression coefficients are 0.007 for Privacy, 0.177 for Reliability, 0.123 for Responsiveness, 0.263 for Trust, and 0.351 for Consumer Satisfaction, with significant values for Trust and Consumer Satisfaction. The adjusted R-squared value is 0.667, indicating that all variables together explain 66.7% of the variability in E-CRM. The SEE is 0.251, and the F-value is 30.619.

## **6. Discussion**

The regression results indicate that the beta coefficients for privacy are positive, suggesting that privacy positively impacts the success of electronic customer relationship management (E-CRM) systems. This outcome aligns with the findings of Park and Kim (2003). Similarly, the beta coefficients for reliability are positive, showing that reliability has a beneficial effect on the success of E-CRM systems. This result is in agreement with the study by Wahab (2009). Likewise, the positive beta coefficients for responsiveness indicate that responsiveness positively influences the success of E-CRM systems, consistent with the findings of Rust and Zahorik (2012). Additionally, the positive beta coefficients for trust suggest that trust enhances the success of E-CRM systems. This observation is supported by the research of Gefen (2020). Further, the positive beta coefficients for consumer satisfaction demonstrate that customer satisfaction positively impacts the success of E-CRM systems. This finding is consistent with the research conducted by Romano and Fjermestad (2003).

## **7. Conclusion**

The analysis of respondents' perceptions of privacy, reliability, responsiveness, trust, customer satisfaction, and the success of Electronic Customer Relationship Management (E-CRM) systems reveals several key insights. Most respondents emphasize the importance of privacy, with a significant majority agreeing that privacy statements and third-party verification are essential for ensuring confidentiality and building trust. Reliability also emerges as a critical factor, with a high percentage of respondents expressing confidence in the availability and accuracy of the E-CRM system. Similarly, responsiveness is highly valued, with respondents appreciating the quick and efficient assistance provided by E-CRM operators. Trust is another crucial element, as many respondents feel comfortable sharing sensitive information due to the robust security measures in place. Customer satisfaction is also highlighted, with a majority of respondents expressing satisfaction with the services provided and the quality of financial advice offered online. The correlation and regression analyses further reveal the significant positive relationships between these factors and the success of

E-CRM systems, indicating that enhancing privacy, reliability, responsiveness, trust, and customer satisfaction can lead to substantial improvements in E-CRM performance. Overall, the findings suggest that organizations should prioritize these aspects to ensure the effective implementation and success of their E-CRM systems.

It is found that there is positive impact of privacy on E-CRM success, suggesting that insurance companies should prioritize the confidentiality of client information. Reliability also showed a significant positive effect, indicating that creating dependable services is crucial for E-CRM success. Similarly, responsiveness was found to positively influence E-CRM, highlighting the importance of promptly addressing client needs. This study serves as a preliminary step in investigating E-CRM success in Nepalese insurance and opens avenues for future research. Future studies could benefit from larger sample sizes and incorporating secondary data to enhance the validity of predictions. Additionally, exploring other insurance sectors, such as life and non-life insurance, could provide a broader perspective on E-CRM success factors. Future research might also consider different physiological and psychological constructs and employ advanced statistical models and tools to further examine the effects of trust, privacy, service quality, and customer satisfaction on E-CRM success.

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