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# Digital Service Distribution in Banking: Understanding Customer's Continued Usage Intention of Live Technology Through Customer Readiness Perspective

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## Abstract

**Purpose:** This study examined the impact of self-service technology (SST) on customers' continued intention to use banking services, focusing on the LiveBank distribution system in Vietnam. The research aimed to explore how factors such as usefulness, ease of use, cost-saving, self-control, and customer readiness influence the sustained adoption of hybrid SST systems that combine automation with human interaction. **Research design, data, and methodology:** A structured survey gathered data from 473 banking customers with LiveBank experience. The measurement and structural models were analyzed using Partial Least Squares Structural Equation Modeling through SmartPLS software. **Results:** Results showed that customer readiness had the most substantial direct effect on the continued intention to use LiveBank, followed by perceived usefulness. Ease of use significantly influenced usefulness and readiness, while cost-saving and self-control had meaningful, though negligible, impacts on readiness. The mediating effects analysis revealed significant indirect relationships, with the strongest path being ease of use through usefulness to customer readiness. **Conclusions:** The research concluded that hybrid SST systems improve customer adoption by balancing technological efficiency with human support. These findings contribute to the theoretical understanding of SST adoption and offer practical guidance for implementing hybrid banking systems in emerging markets, particularly in the context of Vietnam's rapidly evolving digital banking landscape.

**Keywords:** Self-Service Technology, Continued Intention, Customer Readiness, Live Banking, Technology Adoption

**JEL Classification Code:** G21, O33, M31

## 1. Introduction

The rapid advancement of digital technologies has fundamentally transformed how banks deliver services to customers (Nhung et al., 2023; Diener & Špaček, 2021). Traditional face-to-face banking services are increasingly being replaced by innovative self-service technologies (SSTs) that enable customers to access banking services

independently without direct staff assistance (Nagadeepa et al., 2024). This digital transformation has been further accelerated by the COVID-19 pandemic, highlighting the critical importance of technology-driven green financial services, particularly innovative electronic banking services (Guang-Wen & Siddik, 2023).

Self-service technology has emerged as an essential feature in retail banking, facilitating communication

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between humans and machines in daily financial transactions (Iberahim et al., 2016). For banks, SST implementation offers significant benefits, including reduced operating costs, as the operating expenses of digital banking are estimated at only 25-30% compared to traditional retail banking (Chau & Lai, 2003). From the customer perspective, SSTs provide greater convenience, time savings, and control over banking transactions (Ismail & Pastory, 2024). However, the successful implementation of SSTs depends heavily on customers' continued usage rather than just initial adoption (Khoa et al., 2022; Eriksson & Nilsson, 2007).

While extensive research has examined SST adoption in banking, several important gaps remain in understanding customers' continued usage behavior. First, most existing studies have focused primarily on initial SST adoption rather than continued usage (Ho & Ko, 2008; Eriksson & Nilsson, 2007). This represents a significant gap as customer retention is more cost-effective than acquisition, with studies showing that acquiring new customers may cost five times more than retaining existing ones (Bhattacharjee, 2001). While studies have investigated various SST platforms like ATMs, mobile banking, and Internet banking, limited research exists on innovative hybrid systems like LiveBank that combine automated services with human interaction through video banking. Such systems represent a new generation of SSTs that warrant specific investigation regarding continued usage behavior. Moreover, existing research has predominantly focused on developed markets with high digital literacy levels. Vietnam represents a compelling context for studying SST adoption in banking due to its rapid digital transformation and unique market characteristics. As one of the fastest-growing economies in Southeast Asia with a 97.5 million population and 70% smartphone penetration rate (Minh-Ngoc, 2023), Vietnam is experiencing a significant shift towards digital banking. The country's young, tech-savvy population, combined with government initiatives promoting cashless payments and digital financial inclusion, makes it an ideal setting to examine SST adoption patterns. Furthermore, Vietnam's emerging market status presents distinct challenges in technology adoption, including infrastructure limitations and varying levels of digital literacy (Ullah et al., 2022), providing valuable insights for other developing economies. There is limited understanding of SST's continued usage in emerging markets where digital transformation is still in progress and traditional banking channels maintain significant relevance (Khan et al., 2024). This gap is significant as banks in emerging markets are rapidly expanding their SST offerings.

This study aims to investigate the impact of self-service technology on customers' continued intention to use banking services, specifically focusing on the LiveBank distribution

system. The specific objective is to examine how different dimensions of technology service influence customers' continued intention to use LiveBank services.

The remainder of this paper is organized as follows: Section 2 presents the theoretical background and hypothesis development. Section 3 describes the research methodology. Section 4 presents the data analysis and results. Finally, Section 5 discusses the findings, theoretical and practical implications, limitations, and future research directions.

## 2. Literature Review

### 2.1. Technology Acceptance Model in Self-Service Technology for LiveBank

The Technology Acceptance Model (TAM) has been widely applied to understand users' adoption and continued use of self-service technologies in banking (Khoa & Huynh, 2024b; Davis, 1989). The original TAM posits that perceived usefulness and ease of use are primary determinants of users' attitudes and behavioral intentions toward technology. However, in the context of innovative banking SSTs like LiveBank, the model needs adaptation to capture the unique characteristics of video-enabled banking services.

Unlike traditional TAM applications, this study incorporates cost-saving and self-control as additional technological factors while replacing attitude with customer readiness. This modification is supported by Ho and Ko (2008), who argue that customer readiness better reflects users' mental state and predisposition toward using new banking technologies. Customer readiness encompasses role clarity, motivation, ability, and optimism - particularly relevant for LiveBank adoption as it represents a novel hybrid between fully automated and human-assisted banking services.

LiveBank is an innovative video banking solution introduced in Vietnam in 2017 (Ha & Nguyen, 2022). It combines self-service technology with real-time video interaction, allowing customers to conduct banking transactions and receive personalized assistance from bank staff remotely (Hoang, 2024). The system features video-enabled kiosks equipped with document scanning, biometric authentication, and card processing capabilities. Unlike traditional ATMs or online banking, LiveBank provides a hybrid service model where customers can independently perform transactions while having immediate access to human support through video calls. This hybrid approach represents a significant evolution in banking SSTs, bridging the gap between digital convenience and personalized service.

The cost-saving dimension captures both monetary and non-monetary benefits of using LiveBank, including reduced transaction fees and time savings (Globerson & Maggard, 1991). Self-control reflects users' ability to manage banking transactions independently while maintaining access to human assistance when needed (Lee & Allaway, 2002). These factors are especially pertinent for LiveBank as they offer users greater autonomy in banking transactions while providing the security of immediate access to banking staff through video connectivity.

**Table 1:** Summary of Key Related Studies

| Author(s) & Year            | Focus                                      | Key Findings                                                                                                        | Relevance to Present Study                                         |
|-----------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Eriksson and Nilsson (2007) | Continued use of Internet banking          | Perceived usefulness positively affects continued use; multichannel satisfaction has a negative impact.             | Provides the framework for analyzing the continued usage behavior  |
| Ho and Ko (2008)            | Customer readiness in Internet banking     | Customer readiness significantly influences adoption intention; cost savings and self-control are key determinants. | Supports inclusion of customer readiness and cost-saving variables |
| Iberahim et al. (2016)      | Service quality in retail banking SSTs     | Reliability and responsiveness significantly impact customer satisfaction                                           | Validates the importance of service quality dimensions             |
| Khan et al. (2024)          | Technology service quality during pandemic | Service quality dimensions differently impact satisfaction with digital banking.                                    | Offers insights on service quality measurement                     |
| Baldassarre et al. (2024)   | Multi-channel banking distribution         | Integration of digital and physical channels affects customer behavior                                              | Supports analysis of hybrid banking systems                        |

Source: Authors' summary

## 2.2. Hypotheses Development

Customer readiness refers to the degree to which customers are mentally and technically prepared to adopt and use self-service technologies (Tahar et al., 2020). According to Ho and Ko (2008), customer readiness encompasses role clarity, motivation, ability, and optimism toward technology use. Their study found that customers with higher readiness levels are likelier to continue using banking SSTs. This relationship is particularly relevant for LiveBank, requiring users to be mentally prepared for video-enabled banking interactions. Khoa (2023); Lin and Hsieh (2006) found that customer readiness significantly affects SST adoption and continued use. Similarly, Parasuraman

(2000) demonstrated that technology readiness influences customers' acceptance and future usage of SSTs. Meuter et al. (2003) further validated this relationship, showing that customer readiness strongly impacts the trial conditions of SST. As a result of this research, the following idea was proposed:

**H1:** Customer readiness positively impacts Live Banking Service Continued Usage Intention

Usefulness is defined as the extent to which customers believe that using system would enhance their service performance (Khoa & Huynh, 2024b). Eriksson and Nilsson (2007) found that perceived usefulness significantly influences Internet banking continuance. This relationship is explained by Davis (1989), who argues that users are more likely to continue using technology when they perceive it as beneficial to their performance. The impact of usefulness on continued usage is particularly relevant for LiveBank due to its unique value proposition, which combines digital convenience with human interaction. This is supported by Bhattacharjee (2001), who found that perceived usefulness remains a crucial factor in post-adoption behavior. Furthermore, Curran and Meuter (2005) confirmed that perceived usefulness affects customers' intentions to continue using Internet banking services.

The relationship between perceived usefulness and customer readiness is grounded in technology acceptance research. Ho and Ko (2008) demonstrated that when users recognize the utility of banking SSTs, their readiness to engage with the technology increases. This relationship is significant for LiveBank, as understanding its benefits can enhance users' preparedness to utilize the system. Liu et al. (2024) found that customers are more willing to adopt SSTs when they recognize their pragmatic value. Additionally, Meuter et al. (2003) showed that customer readiness increases when SST fits into users' lives and work patterns, supporting the impact of perceived usefulness on readiness. Hence, this investigation presented the hypotheses:

**H2:** Usefulness positively impacts Continued intention to use Live Banking Service

**H3:** Usefulness positively impacts Customer readiness with Live Banking Service

Ease of use represents the degree to which customers believe that using system would be free of effort (Khoa & Huynh, 2024a; Anifa & Sanaji, 2022). Lee and Allaway (2002) found that users with greater self-efficacy, derived from perceived ease of use, demonstrate higher readiness levels. For LiveBank, this relationship is particularly relevant given its innovative interface combining digital and human interactions. Dabholkar (1996) concluded that ease of use is essential for consumers' acceptance of SSTs. Ting and Ahn (2024) further demonstrated that complexity can

hinder customers' clarity and ability, reducing their readiness to use SST.

The relationship between ease of use and usefulness is well established in technology acceptance literature. Davis (1989) demonstrated that ease of use contributes to users' perceptions of technology usefulness. For LiveBank, this relationship is crucial as the system's perceived usefulness may depend on how easily users can navigate its video-banking features. Aldammagh et al. (2021) found that ease of use significantly influences perceived usefulness in Internet banking contexts. Additionally, Pikkarainen et al. (2004) confirmed this relationship in online banking adoption. Hence, this study proposed the hypotheses:

**H4:** Ease of Use positively impacts Customer readiness with Live Banking Service

**H5:** Ease of Use positively impacts the Usefulness of Live Banking Service

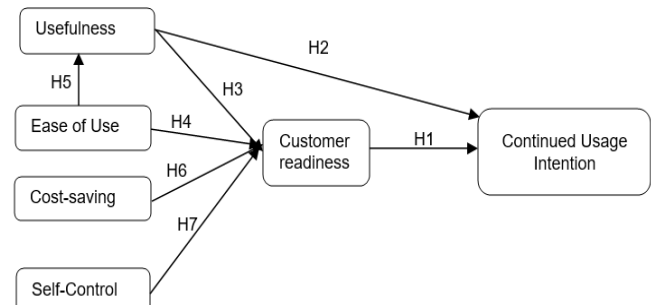
Cost-saving is conceptualized as the perceived monetary and non-monetary benefits obtained through using LiveBank compared to traditional banking channels (Globerson & Maggard, 1991). Ho and Ko (2008) identified cost savings as a significant factor affecting customer readiness in Internet banking. This relationship is particularly relevant for LiveBank as it offers potential savings in time and transaction costs while maintaining access to personal service. Supporting this hypothesis, Globerson and Maggard (1991) found that cost savings motivate self-service adoption. Additionally, Meuter et al. (2003) confirmed that financial savings contribute to SST satisfaction and continued use. Consequently, this study posited the hypothesis:

**H6:** Cost-saving positively impacts Customer readiness with Live Banking Service

Self-control refers to the extent to which customers can independently manage and control their banking transactions through LiveBank (Lee & Allaway, 2002). Lee and Allaway (2002) demonstrated that self-control strongly correlates with SST adoption readiness. For LiveBank, this relationship is especially relevant as the system offers users control over their banking activities while maintaining access to professional assistance. This hypothesis is supported by Michelle Bobbitt and Dabholkar (2001), who found that consumers with stronger self-control demonstrate greater willingness to use online services. Furthermore, Dabholkar (1996) confirmed that self-control significantly impacts customers' acceptance of SSTs. As a result, this study presented the following hypothesis:

**H7:** Self-Control positively impacts Customer readiness with Live Banking Service

This study proposed the research model in Figure 1 from the theoretical framework and the hypotheses.



Source: Authors' development

Figure 1: Research Model

## 3. Method

### 3.1. Measurement Scale

To ensure content validity, measurement items were adapted from established scales in previous research on self-service technology and banking services. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The measurement scales were refined through a pilot study with 30 LiveBank users and reviewed by three academic experts in banking technology.

Usefulness (USE) was measured using three items adapted from Ho and Ko (2008); Davis (1989):

- USE1: LiveBank improves my banking transaction effectiveness
- USE2: LiveBank enables me to accomplish banking tasks more quickly
- USE3: LiveBank helps manage my banking transactions

Ease of Use (EOU) was assessed using three items derived from Ho and Ko (2008) and Iberahim et al. (2016):

- EOU1: Learning to operate LiveBank is easy for me
- EOU2: I find LiveBank clear and understandable to use
- EOU3: I find it easy to become skillful at using LiveBank

Cost-saving (COS) measurement included three items adapted from Ho and Ko (2008); Globerson and Maggard (1991):

- COS1: Using LiveBank saves me transportation costs
- COS2: Using LiveBank saves me time waiting for service
- COS3: Using LiveBank reduces my banking transaction costs

Self-control (SEC) was measured using three items based on Lee and Allaway (2002):

- SEC1: LiveBank gives me more control over my banking transactions
- SEC2: LiveBank allows me to handle banking services independently
- SEC3: I have complete control over the pace when using LiveBank

Customer Readiness (CRE) was assessed using three items adapted from Al-Qubati and Al-Shaibany (2024):

- CRE1: I feel confident in my ability to use LiveBank
- CRE2: I am clear about how to use LiveBank services effectively
- CRE3: Using LiveBank fits well with my banking needs

Continued Intention to Use (CIU) was measured using three items based on Albashrawi and Motiwalla (2017):

- CIU1: I intend to continue using LiveBank rather than discontinue its use
- CIU2: I will regularly use LiveBank in the future
- CIU3: I will frequently use LiveBank for my banking transactions

### 3.2. Sample and Data Collection

The research was conducted in Vietnam and focused on customers with experience using the LiveBank system. The sampling frame consisted of customers from central commercial banks implementing LiveBank. A purposive sampling technique was employed to ensure respondents had at least three months of experience with LiveBank, enabling them to provide informed responses about continued usage intention.

Data was collected between October and December 2023 using online and offline surveys. The online survey was distributed through banks' customer databases and social media platforms, while offline surveys were conducted at bank branches equipped with LiveBank facilities.

The required sample size was determined using Hair Jr et al. (2016) recommendation of at least 10 observations per measured variable. With 18 measured variables in our model, a minimum sample size of 180 was required. We distributed 600 questionnaires and received 493 responses. After excluding incomplete responses and those with suspicious answering patterns, 473 valid responses were retained for analysis, representing a response rate of 78.8%.

Table 2 summarizes the demographic characteristics of the 473 respondents. The sample included a balanced representation of gender, age groups, and banking experience, reflecting a diverse customer base for LiveBank services.

**Table 2: Demographic Breakdown of Respondents**

| Category           | Subcategory      | n   | %    |
|--------------------|------------------|-----|------|
| Gender             | Male             | 246 | 52   |
|                    | Female           | 227 | 48   |
| Age                | Below 25         | 98  | 20.7 |
|                    | 25–34            | 215 | 45.5 |
|                    | 35–44            | 115 | 24.3 |
|                    | 45 and above     | 45  | 9.5  |
| Education Level    | High School      | 60  | 12.7 |
|                    | Bachelor         | 300 | 63.4 |
|                    | Master           | 113 | 23.9 |
| Banking Experience | Less than 1 year | 89  | 18.8 |
|                    | 1–3 years        | 210 | 44.4 |
|                    | Over 3 years     | 174 | 36.8 |

Source: Authors' own calculations

## 4. Results

### 4.1. Measurement Model Assessment

The measurement model was evaluated using SmartPLS 4.0 to assess reliability and validity. Following 's (2017) recommendation, we examined indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

The result of the convergent validity assessment is presented in Table 3. All item loadings exceeded the threshold of 0.70, ranging from 0.878 to 0.914, indicating satisfactory indicator reliability. The internal consistency reliability was confirmed as Composite Reliability (CR), and Cronbach's Alpha ( $\alpha$ ) values were above 0.70 for all constructions. Convergent validity was established as the Average Variance Extracted (AVE) values exceeded 0.50 for all constructs, ranging from 0.791 to 0.827.

**Table 3: Results of Measurement Model Assessment**

| Construct          | Items | Loadings | CR    | AVE   | $\alpha$ |
|--------------------|-------|----------|-------|-------|----------|
| Usefulness (USE)   | USE1  | 0.892    | 0.931 | 0.818 | 0.889    |
|                    | USE2  | 0.908    |       |       |          |
|                    | USE3  | 0.912    |       |       |          |
| Ease of Use (EOU)  | EOU1  | 0.885    | 0.924 | 0.802 | 0.877    |
|                    | EOU2  | 0.901    |       |       |          |
|                    | EOU3  | 0.899    |       |       |          |
| Cost-saving (COS)  | COS1  | 0.878    | 0.919 | 0.791 | 0.868    |
|                    | COS2  | 0.895    |       |       |          |
|                    | COS3  | 0.897    |       |       |          |
| Self-Control (SEC) | SEC1  | 0.883    | 0.922 | 0.797 | 0.873    |
|                    | SEC2  | 0.904    |       |       |          |
|                    | SEC3  | 0.891    |       |       |          |

| Construct                        | Items | Loadings | CR    | AVE   | $\alpha$ |
|----------------------------------|-------|----------|-------|-------|----------|
| Customer Readiness (CRE)         | CRE1  | 0.889    | 0.925 | 0.804 | 0.879    |
|                                  | CRE2  | 0.906    |       |       |          |
|                                  | CRE3  | 0.895    |       |       |          |
| Continued Intention to Use (CIU) | CIU1  | 0.901    | 0.935 | 0.827 | 0.895    |
|                                  | CIU2  | 0.914    |       |       |          |
|                                  | CIU3  | 0.913    |       |       |          |

Source: Authors' own calculations

Discriminant validity was assessed using the Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio (Henseler et al., 2014). The Fornell-Larcker criterion in Table 4 was satisfied as the square root of AVE for each construct (diagonal values) exceeded its correlations with other constructs. The HTMT ratios in Table 5 were all below 0.85, further confirming discriminant validity.

**Table 4:** Discriminant Validity Assessment (Fornell-Larcker Criterion)

| Construct | USE          | EOU          | COS         | SEC          | CRE          | CIU          |
|-----------|--------------|--------------|-------------|--------------|--------------|--------------|
| USE       | <b>0.904</b> |              |             |              |              |              |
| EOU       | 0.582        | <b>0.895</b> |             |              |              |              |
| COS       | 0.534        | 0.498        | <b>0.89</b> |              |              |              |
| SEC       | 0.561        | 0.512        | 0.489       | <b>0.893</b> |              |              |
| CRE       | 0.623        | 0.589        | 0.543       | 0.567        | <b>0.897</b> |              |
| CIU       | 0.648        | 0.556        | 0.521       | 0.534        | 0.682        | <b>0.909</b> |

Source: Authors' own calculations

**Table 5:** Heterotrait-Monotrait Ratio (HTMT)

| Construct | USE   | EOU   | COS   | SEC   | CRE   | CIU |
|-----------|-------|-------|-------|-------|-------|-----|
| USE       | -     |       |       |       |       |     |
| EOU       | 0.658 | -     |       |       |       |     |
| COS       | 0.615 | 0.569 | -     |       |       |     |
| SEC       | 0.642 | 0.585 | 0.561 | -     |       |     |
| CRE       | 0.705 | 0.671 | 0.622 | 0.648 | -     |     |
| CIU       | 0.726 | 0.631 | 0.597 | 0.609 | 0.771 | -   |

Source: Authors' own calculations

## 4.2. Structural Model Assessment

The structural model was evaluated using a bootstrapping procedure with 5,000 resamples. Before hypothesis testing, we assessed potential collinearity issues by examining Variance Inflation Factor (VIF) values. All VIF values in Table 6 were below 3.0, indicating no serious collinearity issues.

**Table 6:** Collinearity Assessment (VIF Values)

| Endogenous Variable        | Predictor | VIF   |
|----------------------------|-----------|-------|
| Customer Readiness         | USE       | 1.892 |
|                            | EOU       | 1.756 |
|                            | COS       | 1.684 |
|                            | SEC       | 1.723 |
| Usefulness                 | EOU       | 1.000 |
| Continued Intention to Use | USE       | 2.134 |
|                            | CRE       | 1.987 |

Source: Authors' own calculations

In Table 7, the Q<sup>2</sup> values obtained through the blindfolding procedure (omission distance = 7) were above zero, indicating the model's predictive relevance. The model demonstrated strong explanatory power with R<sup>2</sup> values of continued Intention to Use (CIU): 0.562 (56.2%); customer Readiness (CRE): 0.534 (53.4%); usefulness (USE): 0.339 (33.9%).

**Table 7:** Predictive Relevance Assessment

| Endogenous Construct | R <sup>2</sup> | Adjusted R <sup>2</sup> | Q <sup>2</sup> |
|----------------------|----------------|-------------------------|----------------|
| CIU                  | 0.562          | 0.559                   | 0.458          |
| CRE                  | 0.534          | 0.529                   | 0.423          |
| USE                  | 0.339          | 0.337                   | 0.274          |

Source: Authors' own calculations

The effect sizes (f<sup>2</sup>) in Table 8 ranged from small (0.076) to large (0.512), suggesting meaningful impacts of the predictor variables. The results in Table 8 supported all hypothesized relationships. Customer readiness showed the most substantial direct effect on continued intention to use ( $\beta = 0.456, p < 0.001$ ), followed by usefulness ( $\beta = 0.367, p < 0.001$ ). Ease of use strongly influenced usefulness ( $\beta = 0.582, p < 0.001$ ). Among the determinants of customer readiness, usefulness had the most substantial effect ( $\beta = 0.312, p < 0.001$ ), followed by ease of use ( $\beta = 0.284, p < 0.001$ ), self-control ( $\beta = 0.246, p < 0.001$ ), and cost-saving ( $\beta = 0.223, p < 0.001$ ).

The mediating effects analysis reveals several significant indirect relationships in the digital banking adoption model. All results demonstrated significant indirect effects with t-values exceeding 1.96. These results highlight the crucial role of customer readiness as a mediating variable and suggest that focusing on ease of use and usefulness improvements is most effective in enhancing customer readiness and continued usage intention in digital banking services.

**Table 8:** Results of Structural Model Analysis

| Relationship                            | Path Coefficient ( $\beta$ ) | t-value | f <sup>2</sup> | Support           |
|-----------------------------------------|------------------------------|---------|----------------|-------------------|
| H1: CRE $\rightarrow$ CIU               | 0.456                        | 8.934   | 0.284          | Yes               |
| H2: USE $\rightarrow$ CIU               | 0.367                        | 7.256   | 0.183          | Yes               |
| H3: USE $\rightarrow$ CRE               | 0.312                        | 6.789   | 0.142          | Yes               |
| H4: EOU $\rightarrow$ CRE               | 0.284                        | 5.987   | 0.118          | Yes               |
| H5: EOU $\rightarrow$ USE               | 0.582                        | 14.567  | 0.512          | Yes               |
| H6: COS $\rightarrow$ CRE               | 0.223                        | 4.892   | 0.076          | Yes               |
| H7: SEC $\rightarrow$ CRE               | 0.246                        | 5.234   | 0.089          | Yes               |
| EOU $\rightarrow$ USE $\rightarrow$ CRE | 0.182                        | 6.234   |                | Partial Mediation |
| USE $\rightarrow$ CRE $\rightarrow$ CIU | 0.142                        | 5.467   |                | Partial Mediation |
| EOU $\rightarrow$ CRE $\rightarrow$ CIU | 0.129                        | 4.892   |                | Partial Mediation |
| COS $\rightarrow$ CRE $\rightarrow$ CIU | 0.102                        | 4.234   |                | Partial Mediation |
| SEC $\rightarrow$ CRE $\rightarrow$ CIU | 0.112                        | 4.567   |                | Partial Mediation |

Source: Authors' own calculations

## 5. Conclusion

### 5.1. Discussion

This study aimed to explore the impact of self-service technology on customers' continued intention to use banking services, specifically focusing on the LiveBank distribution system. The findings provide valuable insights into the factors influencing sustained usage of SSTs in the banking sector, aligning with and extending existing literature.

Incorporating customer readiness as a substitute for attitude offers a nuanced understanding of users' predispositions towards SSTs. Ho and Ko (2008) highlighted the importance of customer readiness in SST adoption, and our findings extend this by demonstrating its significant positive impact on continued intention to use LiveBank (H1 was supported,  $\beta = 0.456$ ,  $t = 8.934$ ). This suggests that customers who feel prepared and confident in using SSTs are more likely to sustain their usage, reinforcing Parasuraman and Grewal (2000) concept of technology readiness influencing SST acceptance.

Furthermore, the results corroborate the foundational premises of the Technology Acceptance Model as posited by Davis (1989), where perceived usefulness and ease of use significantly influence users' continued intention to use SSTs. Our study found that USE positively impacts the continued intention to use LiveBank (H2 was supported,  $\beta = 0.367$ ,  $t = 7.256$ ), echoing the findings of Eriksson and Nilsson (2007) that perceived usefulness is a critical determinant of continued SST usage.

The positive relationship between USE and CRE (H3 was supported,  $\beta = 0.312$ ,  $t = 6.789$ ) suggests that perceived usefulness directly affects continued usage and enhances the user's readiness to engage with the technology (Chaka & Govender, 2017; Lin & Hsieh, 2006). This dual pathway

indicates that the benefits perceived by users translate into psychological preparedness that further encourages sustained use, a relationship less emphasized in prior studies.

The dual impact of EOU on CRE (H4 was supported,  $\beta = 0.284$ ,  $t = 5.987$ ) and USE (H5 was supported,  $\beta = 0.582$ ,  $t = 14.567$ ) extends beyond Dabholkar (1996); Davis (1989). The stronger relationship with usefulness compared to customer readiness suggests that user-friendly interfaces primarily influence adoption through enhanced utility perceptions rather than direct psychological readiness. This nuances findings of Lee and Allaway (2002) by highlighting the mediating role of usefulness in SST adoption.

The study also introduced cost-saving and self-control as additional constructs, expanding the traditional TAM framework. The positive effects of COS on CRE (H6 was supported,  $\beta = 0.223$ ,  $t = 4.892$ ) and SEC on CRE (H7 was supported,  $\beta = 0.246$ ,  $t = 5.234$ ) underscore the role of economic and psychological factors in SST usage. This aligns with Globerson and Maggard (1991), who posited that in video-banking contexts, monetary benefits might be less crucial than other factors, potentially due to the value-added nature of human interaction in the service. Similarly, Lee and Allaway (2002) emphasized the importance of self-control in fostering user autonomy and satisfaction, which our findings support by demonstrating its influence on customer readiness. Michelle Bobbitt and Dabholkar (2001) suggests that control perception becomes more critical in hybrid systems where customers can choose between automated and human-assisted services.

Moreover, the strong influence of EOU on USE in the context of LiveBank's hybrid system highlights the unique interplay between digital convenience and human interaction (Tahar et al., 2020; Runze & Jongho, 2017). Unlike fully automated SSTs, LiveBank's video-enabled features require users to navigate technological interfaces and interpersonal interactions. This complexity necessitates a higher degree of ease of use to maintain perceived

usefulness, a dimension that Min and Lee (2023); Pikkarainen et al. (2004) have touched upon but here is demonstrated with greater specificity in a hybrid SST context.

## 5.2. Theoretical Contributions

By incorporating cost-saving and self-control into the TAM framework, this research provides a more comprehensive model for understanding SST adoption and continued use. Traditional TAM primarily focuses on perceived usefulness and ease of use; however, adding COS and SEC offers a deeper insight into economic and psychological motivators that influence user behavior. This extension aligns with Baldassarre et al. (2024), who advocated for a more integrative approach to studying multi-channel distribution in banking.

Replacing the traditional attitude construct with customer readiness represents a novel approach to capturing users' preparedness to engage with SSTs. This shift acknowledges the multifaceted nature of readiness, encompassing role clarity, motivation, ability, and optimism (Ho & Ko, 2008). It bridges the gap between user attitudes and actual behavioral intentions, providing a more dynamic understanding of SST usage.

Focusing on LiveBank's innovative hybrid system, which combines automated services with human interaction, this study adds to the limited research on hybrid SSTs. By examining the interplay between digital and human elements, the research offers valuable insights into how such systems influence continued usage intentions, an area that has received limited attention in prior studies.

Conducting the study in Vietnam, an emerging market with distinct digital transformation dynamics, contributes to the limited research on SST usage in such contexts. This geographical focus broadens the applicability of TAM and SST models beyond developed markets, providing a comparative perspective that highlights the unique challenges and opportunities in emerging economies (Khan et al., 2024).

## 5.3. Managerial Implications

By identifying key determinants of continued SST usage, such as usefulness, ease of use, cost-saving, and self-control, banks can tailor their SST offerings to meet customer needs better. This aligns with Ting and Ahn (2024) recommendations on integrating user feedback into SST design to enhance perceived value and usability.

The positive relationship between cost-saving benefits and customer readiness suggests that banks should effectively communicate the financial and temporal benefits of SSTs. Marketing strategies that emphasize the cost-

efficiency and convenience of SSTs can drive sustained user engagement, as supported by Globerson and Maggard (1991).

The significant impact of customer readiness on continued intention to use SSTs underscores the need for robust educational programs and support mechanisms. Banks should invest in comprehensive training resources and responsive customer service to enhance users' confidence and competence in utilizing SSTs, fostering long-term loyalty (Meuter et al., 2003).

The study highlights the importance of balancing automated efficiency and personalized service in hybrid SST systems like LiveBank. Banks can enhance user satisfaction and trust banks can enhance user satisfaction and trust by ensuring that users have access to

The findings related to service quality dimensions, particularly reliability and responsiveness, suggest that banks should continuously monitor and enhance these aspects to maintain high levels of customer satisfaction. Implementing quality improvement initiatives based on customer feedback can strengthen the perceived reliability of SSTs, fostering continued use (Iberahim et al., 2016).

## 5.4. Limitation and Further Research

While this study provides comprehensive insights into the impact of SST on continued banking service usage, several limitations must be acknowledged. The study was conducted solely in Vietnam, an emerging market with specific cultural and economic contexts. This geographical limitation may affect the generalizability of the findings to other regions with different levels of digital adoption and banking infrastructure. The use of a cross-sectional survey design captures a snapshot of user perceptions at a single point in time. This approach limits the ability to assess changes in user behavior and attitudes over time, which could provide a more dynamic understanding of SST usage patterns. The reliance on self-reported data introduces the potential for common method bias and social desirability bias. Despite efforts to minimize these biases through anonymity and ensuring no right or wrong answers, the accuracy of respondents' answers cannot be wholly guaranteed. Although the study extended the TAM framework by including cost-saving and self-control, other relevant constructs such as trust, perceived risk, and social influence could influence SST usage. Future studies should consider incorporating these additional factors to provide a more holistic understanding of SST adoption and continued use.

Future research can address the limitations of this study and expand upon its findings in several ways. Conducting longitudinal research can capture the evolving nature of user attitudes and behaviors towards SSTs, providing deeper

insights into the factors influencing sustained usage over time. Expanding the study to include multiple countries with varying levels of digital maturity can enhance the generalizability of the findings and uncover cultural influences on SST usage. Future studies should explore additional constructs such as trust, perceived risk, and social influence to enrich the theoretical framework and better explain SST usage dynamics. Complementing quantitative surveys with qualitative methods, such as interviews or focus groups, can provide a more nuanced understanding of user experiences and motivations behind SST usage. Investigating different types of hybrid SST systems across various banking contexts can further elucidate the unique challenges and opportunities of combining automated and human-assisted services. As SSTs evolve with advancements in artificial intelligence and machine learning, future research should examine how these technological innovations influence user perceptions and continued usage intentions.

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