Journal of Information Systems and Informatics
Vol. 7, No. 3, September 2025 e-ISSN: 2656-4882 p-ISSN: 2656-5935
DOI: 10.51519/journalisi.v7i3.1166 Published By DRPM-UBD

Factors Driving Internet Banking Adoption in Guyana: A Study of Developing Countries

Dave Sarran[1], Ibrahim Mohammed[2], Penelope DeFreitas[3]

[1,2,3]Department of Computer Science, Faculty of Natural Sciences, University of Guyana
Email: [1]dave.sarran@uog.edu.gy, [2]ibrahim.mohammed@uog.edu.gy,
[3]penelope.defreitas@uog.edu.gy

Abstract

Internet banking across banking institutions has grown tremendously in popularity over the past two decades. Internet banking among customers remains a crucial challenge within the banking industry, especially in developing countries. As such, this research investigates the factors affecting internet banking adoption in Guyana by extending the Technology Acceptance Model (TAM) to include information quality, service quality, system quality and computer self-efficacy as predictor variables. The study evaluated hypotheses that these variables influence users' perceived ease of use and perceived usefulness, which in turn affect actual usage of internet banking services. Data from 160 internet banking customers was collected and analysed using the Structural Equation Modelling (SEM) approach to test eight (8) hypotheses among constructs of the extended TAM model. The findings of the study suggest that service quality positively affects consumers' perceived ease of use of Internet banking, while computer self-efficacy positively affects consumers' perceived usefulness to adopt Internet banking. The findings also demonstrated that both perceived ease of use and perceived usefulness significantly impacted the actual usage of Internet banking. The findings of this study offer Guyanese banking institutions useful information, emphasizing the necessity of enhancing service quality standards and funding digital literacy programs to increase the adoption of online banking services.

Keywords: Internet banking, technology adoption, usage, Structural equation modelling, Guyana

1. INTRODUCTION

Over the past two decades, banks worldwide have encountered dynamic changes due to technological development and electronic services [1]. Technological advancement in the banking sector has caused banking transactions to shift from traditional paper-based ways of operating to digital processes. Due to global digitalization, banks now incorporate novel types of seamless services that are also much easier for consumers to use. As alternative ways of delivering traditional banking services, commercial banks have introduced technology-based applications and customer-friendly technologies such as Internet and mobile

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banking to meet customer expectations, minimize banking transactions and retain competitive advantages [2], [3], [4]. Innovations such as Internet banking help to increase the productivity of the banking industry while also lowering the costs of customer banking transactions [5]. The adoption of innovations is primarily driven by changing customer behaviour and significant attention is being paid to the adoption of such services.

Internet banking involves a customer accessing their bank accounts and making banking transactions using the Internet [6], [7]. Banking transactions encompass the checking account details, transfer of money, payment of bills, checking and saving balance sheets, using investment and checking services and the purchase of online financial products or services [8], [9]. Since the 1990s, e-banking has been helping banks around the world to increase profitability and reduce transaction costs. Several forms of e-banking exist to meet customer expectations, minimize banking transactions and retain competitive advantages [2], [10]. To achieve these benefits, banks implement customer-friendly technologies such as Internet and mobile banking.

Internet banking around the world has proven to have advantages, especially for retail banking customers. However, while customers may benefit from the utilization of Internet banking services, many people are still reluctant to adopt and utilize them [7], [11]. This in turn affects banks' profitability [12]. The literature in the field of electronic banking shows that various countries exhibit different levels of e-banking adoption. This was indicated by a systematic review of research articles on Internet banking adoption [13]. While the literature on the adoption of internet banking is widespread for the industrialised regions and despite several studies exist on Internet banking adoption in developing countries, there remains a paucity of empirical evidence of the subject in a Guyanese context.

Guyana, a developing country in South America, offers a unique context because of its fast-growing financial and oil and gas sectors. It has a developing information and communication technology infrastructure and is making strides in digital transformation at the national level. However, there is still limited published information and public awareness about how its people are adopting technologies, especially Internet banking. This gap shows the need for local research to understand what drives Internet banking adoption in Guyana's emerging digital economy.

Therefore, this study aims to develop an understanding of the factors that impact the adoption of Internet banking by retail banking customers in Guyana. The study proposes a conceptual model of Internet banking adoption validates same in a Guyanese context. To achieve this aim, the study proposes and validates an extended Technology Acceptance Model (TAM) that includes information quality,

service quality, system quality, and computer self-efficacy as additional predictor variables. Despite several studies exploring the adoption of Internet banking through the lenses of existing models like TAM in both developed and developing regions, there remains a notable lack of empirical research specific to the South American context, particularly Guyana. The findings in such regions may not be fully transferable to Guyana, given the unique social, economic, cultural, political, and technological conditions present in Guyana's banking sector. As such, there is a critical need for localized research in this area to provide both theoretical and practical insights. The results of the study seek to extend the body of literature on customers' adoption of Internet banking in developing countries. Apart from the academic contributions, the findings of the study may be relevant in practical settings to banking practitioners like managers, marketers, and software engineers who wish to improve the adoption and utilization rates of Internet banking services among customers.

2. METHODS

2.1. Theoretical Model

Technology adoption is characterized by the acceptance of an emerging technology or product, or the continued use of it [7], [14]. The issue of e-banking adoption has been investigated in the contexts of both developed and developing countries [12], [15], [16]. Despite its benefits, consumers are reluctant to adopt and accept e-banking technologies in developing countries. Technology adoption research aims to understand, predict, and clarify the factors that affect technology adoption [7], [13].

The literature shows that the Technology Acceptance Model is capable of determining technology acceptance in a range of contexts, including but not limited to electronic learning, mobile applications and electronic commerce [10], [13]. Also, there have been several researchers who have utilized TAM in banking contexts in investigating the variables influencing the adoption of electronic banking services [7, p. 2], [14], [16, p. 202], [17], [18]. In many cases, TAM has been modified through the inclusion of external variables to better align with specific contexts [19], [20], [21].

This paper proposes a conceptual model of Internet banking adoption based on the Technology Acceptance Model. In the proposed model, customers' usage of Internet banking is predicted to be determined by perceived ease of use and perceived usefulness. The model extends TAM through the inclusion of system quality, information quality, service quality, and computer self-efficacy. Figure 1 depicts the comprehensive conceptual model. The subsequent sections provide a rationale and validation for each of the anticipated associations based on prior

research in the field. All generated hypotheses for Internet banking were empirically supported based on literature in the field of Internet banking.

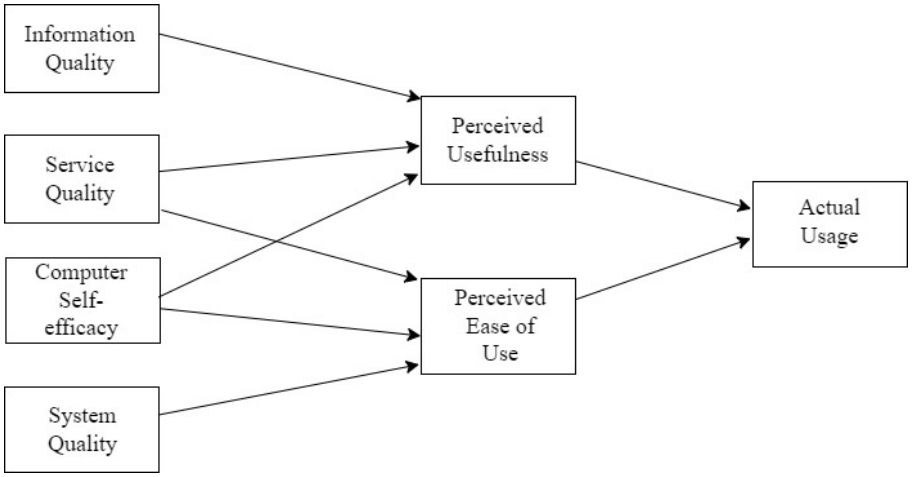

Figure 1. Conceptual Model of the Study

2.1.1. Perceived Usefulness (PU)

Perceived usefulness is the extent to which an individual assumes that using a specific system can improve job performance [19]. Whether or not an information system is accepted, the variable perceived usefulness remains an important variable to consider. The literature identifies perceived usefulness as a significant variable that affects users' technology adoption in the context of internet banking [10], [16], [22]. Therefore, to be consistent with the literature, the following hypothesis was derived:

H1: *Perceived usefulness will have a positive effect on the actual use of Internet banking.*

2.1.2. Perceived Ease of Use (PeoU)

The extent to which an individual using a system or technology will be free of physical or mental effort is referred to as perceived ease of use [19]. Past research has demonstrated that perceived ease of use directly impacts systems adoption and usage [14]. As a result, if Internet banking services are straightforward to use, people are more likely to consider using them or continue to use Internet banking. In this regard, the following hypothesis was derived:

H2: *Perceived ease of use will have a positive effect on the actual use of internet banking*

2.1.3. Service Quality (SerQ)

Service quality is the readiness of systems for handling, processing and resolving consumer requests [23], [24]. It also includes aiding customers in using systems, recommending supplementary services, and working together to solve difficulties [18]. According to previous studies, service quality, perceived usefulness and perceived ease of use are connected [14], [24], [25], [26]. In light of this, the following hypotheses are proposed:

H3: *Service quality positively influences the perceived usefulness to adopt Internet banking*
H4: *Service quality positively influences the perceived ease of use to adopt Internet banking.*

2.1.4. Computer Self-efficacy (CSE)

Computer self-efficacy is defined as a person's assessment of their capacity to use technologies, platforms or electronic services [27]. The literature on the adoption of Internet banking highlights positive associations between computer self-efficacy and perceived usefulness and ease of use [1], [18], [28]. In this regard, the following hypotheses are derived:

H5: *Computer self-efficacy positively influences the perceived usefulness to adopt Internet banking.*
H6: *Computer self-efficacy positively influences the perceived ease of use to adopt Internet banking*

2.1.5. Information Quality (IQ)

Information quality (IQ) refers to the overall relevance, reliability and usefulness of information produced by an electronic system or technological platform [29]. The literature shows that the usefulness of an Internet banking system is directly influenced by the information produced by the system [4], [7], [14]. Banking customers process the information of electronic banking systems to execute financial transactions. Therefore, the system must be capable of providing high-quality information [30]. In that regard, the following hypothesis is derived:

H7: *Information quality positively influences the perceived usefulness to adopt internet banking*

2.1.6. System Quality (SQ)

The performance of a system fulfilling user tasks in terms of reliability, convenience, simplicity of use, functionality, and other system parameters is referred to as system quality [31]. The literature shows that system quality has a substantial impact on information systems' success and positively influences the

perceived ease of use of a system [4], [14], [32]. Therefore, the following hypothesis was derived.

H8: *System quality positively influences the perceived ease of use to adopt internet banking*

2.2. Data Collection

The data in this study was collected using a self-completed questionnaire. The questionnaire was designed based on measurement items of constructs of the concept model, which were adopted in the previous and relevant literature. These measurement items were selected from validated scales used in peer-reviewed research on Internet banking adoption, ensuring content validity and comparability with previous research.

Responses were measured on a Likert scale of 1-5, ranging from "Strongly Disagree" to "Strongly Agree." Given that this research aimed to identify the factors that affect the adoption of Internet banking in Guyana, the questionnaires were delivered via Google Forms to Guyanese citizens from the six commercial banks who would have previously used Internet banking. The six commercial banks were chosen because they are representative of the largest retail banks in Guyana, collectively serving the majority of the population that uses online banking services. The banks were suited to gathering a wide and varied sample of internet banking users due to their nationwide reach and sizable retail customer bases of over 5000 customers.

The questionnaire was designed in three sections. The first section requested information about the demographics of the participants. The second section collected information on the participants' online experience with internet banking platforms. The final section collected information about the conceptual model's factors of interest in this study. The measurement items for each construct of the conceptual model were chosen based on previously validated empirical research within the field of Internet banking.

The sample of this study was derived from customers of six of Guyana's largest commercial banks. The study only considered participants who were customers with an online bank account and had some amount of experience in using Internet banking platforms. The study utilized purposive sampling in selecting respondents for this study based on the above criteria. Respondents were provided with a link to the questionnaire that could only be used once. Participation in the survey was entirely voluntary. A total of 500 questionnaires were disseminated to the sample. A total of 160 valid responses were obtained, indicating a 32% response rate and a satisfactory engagement level for online surveys in a developing country context.

This response rate is higher than the average response rate of 30% in survey research [33].

2.3. Data Analysis

To analyse the data and determine the relationship between constructs of the conceptual model, the Structural Equation Modeling (SEM) approach was used [34]. More specifically, the Partial Least Squares SEM (PLS-SEM) approach was used for this research given its versatility and ability to accommodate complex models that are validated [35]. There exist several studies utilising PLS-SEM in understanding factors influencing the adoption of Internet banking [3], [14], [24]. The assessment of the model was done in two stages: Stage 1 evaluated the measurement model, while Stage 2 assessed the structural model and its hypotheses.

For Stage 1, which assessed the measurement model, reliability analysis was performed for the indicators of the constructs. Reliability refers to the consistency of results obtained from independent but comparable measures of the same item. To test for reliability, the Cronbach Alpha and the Composite Reliability scores were utilized. This involved ensuring that Cronbach's alpha values of the constructs were greater than 0.7 and composite reliability (CR) indices were more than 0.7 [36]. Validity analysis, in two forms, was also performed on the model. Firstly, convergent validity analysis was performed to verify that the Average Variance Extracted (AVE) values of the constructs were higher than 0.50 [36]. Secondly, an assessment of discriminant validity was performed using the Fornell–Larcker and Heterotrait-Monotrait (HTMT) criteria [37].

For Stage 2 of the assessment, the structural model was evaluated by examining the predictive capability (R^2 values) of the constructs. The goodness-of-fit of the model was determined by the R^2 values of each structural path for the dependent variables. According to the literature, these R^2 values should be greater than or equal to 0.1 [38].

2.4. Ethical Considerations

This research was exempted from ethics approval by the University of Guyana's ethics review board since it posed minimal risk to participants and did not involve the collection of any sensitive or private information. This research recruited participants on a voluntary basis. Those who expressed their interest to take part were guaranteed that their feedback and data would be anonymized and treated confidentially for the purposes of reporting and data analysis.

3. RESULTS AND DISCUSSION

3.1 Respondent Profile

Table 1 displays the demographic characteristics of the participants in the study. There was a total of 160 participants in the study. Of the 160 responses, 51.9% were male, while the remaining 48.1% were females. Less than half the respondents (43.1%) were between 25 and 39 years of age, 35.6% were between 18 and 24 years old, 16.9% were between 40 and 54 years of age, and 4.4% were above the age of 55. In terms of occupation status, it was observed that the majority of internet bankers (66.3%) are employed by someone/organization, while the least are pensioners (1.2%). As it relates to usage, it was observed that the majority of the internet bankers (36.9%) utilized his/her preferred internet banking platform once a month. In addition, it was observed that the majority of the respondents (62.5%) have used Internet banking for over one year, while the remaining (37.6%) have used the platform for less than a year.

Table 2 presents the common uses of Internet banking emerging from the data. It is observed that the main transactions were checking balances online (80%) followed by transferring money (54.4%). Less than half of the respondents use Internet banking to pay bills online (48.1%), while approximately 25% download personal bank transaction activity and perform inter-account transfers. The least used aspects of Internet banking that are observed are seeking product and rate information, and applying for consumer loans or credit cards.

3.2 Reliability Testing

The reliability analysis of the constructs for the conceptual model suggests good reliability since Cronbach's Alpha for each construct of the model exceeded the 0.700 threshold (See Table 3). As a result, the constructs of the conceptual model can be deemed consistent and appropriate for evaluating the adoption of Internet banking in a Guyanese context.

Table 1. Respondents' Demographic Information

Demographics	Category	Frequency	Percentage
Age	18-24	57	35.6
	25-39	69	43.1
	40-54	27	16.9
	Over 55	7	4.4
Gender	Male	83	51.9
	Female	77	48.1
Education	Primary	1	0.6
	Secondary	33	20.7

Demographics	Category	Frequency	Percentage
	Tertiary	125	78.1
	None	1	0.6
Occupation	Employed by organisation	106	66.3
	Self-employed	34	21.3
	Pensioner	2	1.2
	Unemployed	18	11.2
Commercial Bank	Bank 1	36	22.5
	Bank 2	69	43.1
	Bank 3	6	3.7
	Bank 4	30	18.8
	Bank 5	17	10.6
	Bank 6	2	1.2
Registered Customer Duration	Less than one month	8	5
	1 to 6 months	30	18.8
	7 to 12 months	22	13.8
	More than 1 year	100	62.5
Frequency of use	Less than one month	39	24.4
	Once a month	59	36.9
	Once every fortnight	21	13.1
	Once a week	22	13.8
	Daily	19	11.9

Table 2. Common uses of Internet banking among respondents

Uses of Internet Banking	Frequency	Percentage
Pay bills	77	48.1
Transfer money	87	54.4
Check balance	128	80
Seek product and rate information	14	8.8
Download personal bank transaction history	41	25.6

3.3 Validity Testing

Firstly, all factor loadings for the measurement items of the conceptual model exceeded 0.7 (See Table 4). Therefore, the factor loading criterion was supported for all variables in the analysis. Secondly, the composite reliability values for scale items were higher than the recommended 0.7 (See Table 4). Therefore, the composite reliability criterion was met for all variables in the analysis. Lastly, the Average Variance Extracted (AVE) values for all constructs were over 0.500 (See Table 4). Therefore, the AVE criterion was met for all variables in the analysis.

To assess discriminant validity, the Fornell-Larcker and Heterotrait-Monotrait criteria were used. Table 5 shows that the square root values of the AVE for all constructs were greater than the associations of these constructs with the other ones in the off-diagonal position [39]. Therefore, the Fornell-Larcker criterion was satisfied. For the Heterotrait-Monotrait criterion, all HTMT values were found to be less than the value of 0.90 [34]. Therefore, the HTMLT criterion was satisfied. (See Table 5).

Table 3. Reliability Analysis

Constructs	Number of Measurement Items	Mean	Cronbach Alpha
Information Quality	5	4.23	0.816
System Quality	3	3.765	0.808
Perceived Usefulness	6	4.344	0.893
Perceived Ease of Use	5	4.203	0.825
Service Quality	5	4.081	0.868
Computer Self-efficacy	4	4.008	0.815
Actual Usage	3	4.423	0.888

Table 4. Factor Loadings

Construct	Measurement Items	Factor Loadings	Composite Reliability (CR)	Average Variance Extracted (AVE)
Actual Usage	AU1	0.878	0.932	0.821
	AU2	0.919		
	AU3	0.920		
Information Quality	IQ1	0.818	0.875	0.584
	IQ2	0.769		
	IQ3	0.811		
	IQ4	0.737		
Perceived Ease of Use	PEOU1	0.801	0.882	0.601
	PEOU2	0.756		
	PEOU3	0.764		
	PEOU4	0.864		
Perceived Usefulness	PU1	0.832	0.919	0.655
	PU2	0.825		
	PU3	0.753		
	PU4	0.838		
	PU5	0.799		
	PU6	0.807		

Construct	Measurement Items	Factor Loadings	Composite Reliability (CR)	Average Variance Extracted (AVE)
Computer Self-efficacy	CSE1	0.827	0.883	0.656
	CSE2	0.858		
	CSE3	0.873		
System quality	SQ1	0.876	0.905	0.657
	SQ2	0.741		
	SQ3	0.920		
Service quality	SerQ1	0.872	0.885	0.721
	SerQ2	0.809		
	SerQ3	0.844		
	SerQ4	0.721		
	SerQ5	0.799		

3.4. Structural Model and Hypothesis Testing

Structural equation modelling was used to test the hypothesized relationships of the study (See Table 6). The structural model (see Fig. 2) reflects the paths hypothesized in the conceptual model. The goodness of fit of the model was determined by the strength of each structural path [38]. The strength of each path was determined by the R^2 value for the dependent variables, which the literature suggested was equal to or over 0.1 [40].

Table 5. Heterotrait-Monotrait Ratio (HTMT) Values

Construct	AU	IQ	PEoU	PU	CSE	ServQ	SQ
AU	**0.637**						
IQ	0.719	**0.701**					
PEoU	0.519	0.551	**0.681**				
PU	0.478	0.498	0.528	**0.881**			
CSE	0.188	0.34	0.585	0.865	**0.696**		
SerQ	0.349	0.363	0.433	0.68	0.826	**0.746**	
SQ	0.332	0.349	0.333	0.48	0.655	0.556	**0.86**

Figure 2 shows that all R^2 values of three dependent variables namely perceived ease of use ($R^2 = 0.639$), perceived usefulness ($R^2 = 0.671$) and actual usage ($R^2 = 0.596$) are more than and equal to 0.1. The analysis revealed a significant amount of variance in perceived usefulness and perceived ease of use. Furthermore, when perceived usefulness and perceived ease of use are combined, it can explain a moderate amount of variance in actual usage. As a result, the conceptual model was found to have a 59.6% predictive capability for the actual usage of Internet banking. Furthermore, the Standardized Root Mean Square Residual (SRMR) was

also used to evaluate the model fit. The SRMS value was 0.093 - slightly below the required value of 0.10, which the literature indicates is necessary for a satisfactory model fit [36].

3.5. Hypothesis Testing

As displayed in Table 6, the research hypotheses were tested and evaluated. Four of the research hypotheses were supported while four were rejected. On one hand, Service Quality (β= -0.110, t = 0.983, p = 0.326) had an insignificant impact on Perceived Usefulness, thereby rejecting hypothesis H1. On the other hand, Service Quality (β = 0.791, t=7.057, p < 0.001) was found to have a significant impact on Perceived Ease of Use, thus supporting hypothesis H2.

Computer self-efficacy (β = 0.292, t =2.962, p = 0.003) was found to have a significant impact on Perceived Usefulness, supporting hypothesis H3. However, computer self-efficacy (β= 0.031, t = 0.262, p = 0.794) was found to have an insignificant impact on Perceived Ease of Use, thus rejecting hypothesis H4. Information Quality (β=0.069, t=0.860, p = 0.390) was found to have an insignificant impact on Perceived Usefulness, thereby rejecting hypothesis H5. Similarly, System Quality (β= -0.029, t=0.395 p = 0.693) was found to have an insignificant impact on Perceived Ease of Use, thus rejecting hypothesis H6. Lastly, Perceived Usefulness (β=0.348, t=2.878, p = 0.004) and Perceived Ease of Use (β= 0.298, t=2.674, p = 0.008) were found to have a significant positive influence on Actual Usage, thus supporting hypotheses H7 and H8.

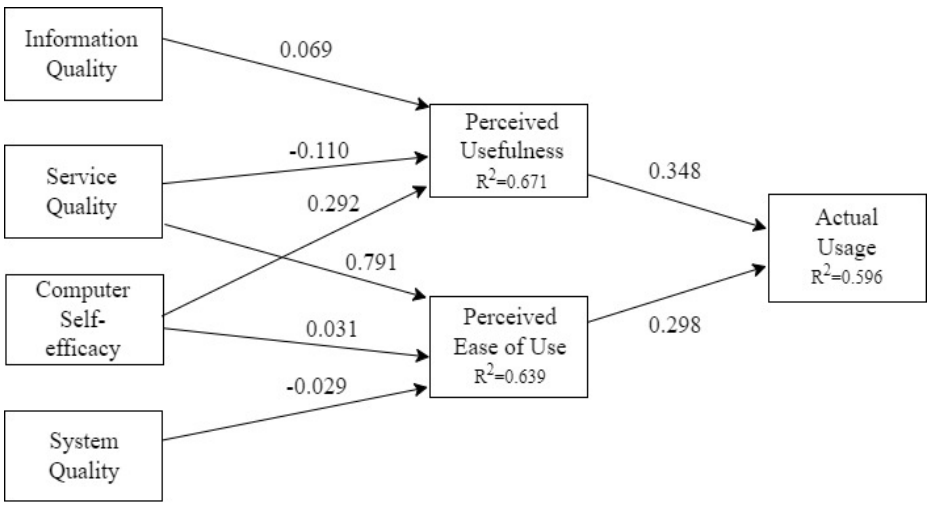

Figure 2. Structural Model Results

Table 6. Summary of Hypothesis Testing

Hypotheses	Paths	Path Coefficient	T-value	P-Value	Supported /Not Supported
H1	PU →AU	0.348	2.878	0.004	Yes
H2	PEoU → AU	0.298	2.674	0.008	Yes
H3	SerQ → PU	-0.110	0.983	0.326	No
H4	SerQ → PEoU	0.791	7.057	0.000	Yes
H5	CSE → PU	0.292	2.962	0.003	Yes
H6	CSE → PEoU	0.031	0.262	0.794	No
H7	IQ → PU	0.069	0.860	0.390	No
H8	SQ →PEoU	-0.029	0.395	0.693	No

Note: *AU, Actual Usage; PU, Perceived Usefulness; PEoU Perceived Ease of Use; SerQ, Service Quality; CSE, Computer Self-efficacy; IQ, Information Quality; SQ, Service Quality*

3.6. Discussion

The study aimed to investigate the factors impacting customers' adoption of Internet banking. It was determined that Service Quality had a direct relationship with and a strong impact on Perceived Ease of Use. This finding aligns with previous research that points to a positive connection between service quality and perceived ease of use and demonstrates that customers' confidence in navigating online banking platforms increases with high-quality service environments [24], [41], [42]. This suggests that when customers see the online banking service as reliable, responsive, and easy to use, they are more likely to find the system simple to navigate. In Guyana, where digital financial skills might still be growing, providing quality service design and responsiveness could be key in helping users adapt to the technology.

Despite the positive relationship between service quality and perceived ease of use, the findings of this study did not show a significant relationship between service quality and perceived usefulness. Therefore, customers patronizing Internet banking services in a Guyanese context are not influenced by an online banking service provider. This sharply contrasts with prior research that found that service quality significantly enhanced perceived usefulness [14], [41], [43]. This difference may reflect regional and contextual variations where in Guyana, customers may see usefulness as tied to personal skill or system efficiency instead of service features. This inconsistency might show that, in Guyana, customers separate the quality of the service experience from the practical use of the system.

The findings of the study demonstrate that computer self-efficacy has a strong influence on perceived usefulness. Many studies have shown that computer self-

efficacy creates a positive impact on perceived usefulness to utilise Internet banking [18], [44], [45]. Individuals with high computer self-efficacy demonstrate a stronger inclination to effectively use technology because they feel they have the capability to do so [1], [18], [46], [47], [48]. Therefore, a customer with a high level of computer self-efficacy is more confident in his or her capacity to accomplish particular activities using the system. This may be particularly important in Guyana, where gaps in digital literacy exist. Unlike in highly industrialized and digitized economies, confidence in using technology in Guyana seems to play a major role in how users evaluate the usefulness of the system. In this context, it emphasizes the need for national digital literacy programs which could empower users and result in greater perceived value in adopting online banking platforms.

While the study showed a positive association between computer self-efficacy and perceived usefulness, it did not show a positive relationship between computer self-efficacy and perceived ease of use to adopt Internet banking. This finding differs from existing literature which shows that computer self-efficacy serves as a precursor to perceived ease of use [44], [45], [46]. The differences in this study may be due to varying contexts. Guyanese users with high self-efficacy might still face barriers related to infrastructure that make the system seem challenging to use. Additionally, other issues could be involved, like limited access to technology training or a dependence on in-person banking. This issue may prevent individuals from turning their confidence into ease of use but could be alleviated through better user onboarding and customer support services. People with a low sense of computer self-efficacy can become demotivated to utilize technology because they perceive themselves as not having the ability and capacity to do so [44], [45].

The results of the study demonstrated that information quality does not influence the perceived usefulness of Internet banking. This is contrary to past studies which posit that accurate and timely information is a critical determinant of usefulness and that information quality significantly influences perceived usefulness [14], [24], [49]. The differing results here may show that Guyanese users place less importance on informational features. Instead, they might focus more on transactional functions. One possible interpretation is that customers in Guyana might not see detailed or up-to-date information as important when assessing the usefulness of online banking platforms. This suggests that banks might need to better communicate the value of the information offered through their platforms. The results of the study further showed that system quality does not significantly impact perceived ease of use. As with the last, this finding is contrary to past studies that show system quality has a significant relationship with perceived ease of use [32], where elements like interface design and technical reliability were directly connected to user satisfaction. In Guyana, however, users might have lower expectations for digital services, leading to less sensitivity to system quality. This could mean that users may care more about the results of the service than the

system's infrastructure or interface, possibly due to low expectations or limited previous experience with digital banking systems.

The findings of the study demonstrated that Perceived Usefulness positively affects actual usage of Internet banking. This result aligns with studies in the past that suggest that Perceived Usefulness has the capacity to impact actual usage directly [17], [50]. This also algins with the foundational Technology Acceptance Model [51] and highlights how crucial it is to communicate clear benefits to users. In Guyana, where in-person banking is still the norm, emphasizing time savings, convenience, and 24/7 access can strengthen the perceived value of digital options. This underscores the need for banks to clearly explain the practical benefits of Internet banking to encourage people to adopt same. If individuals have faith in a technology that generates potential benefits, they will employ and utilize same [45]. Lastly, the results demonstrated that perceived ease of use directly influences actual usage of Internet banking. This finding is supported by past studies [50]. Since perceived ease of use is based on users' effort to utilise a system, it influences and shapes the actual usage of a system being sensitive and emphatic to their requirements. [14], [45]. This supports the idea that making user interfaces simpler and lowering learning curves can greatly increase adoption rates. For banking professionals in Guyana, this means that investing in easy-to-use designs, clear navigation, and accessible user support can directly affect customer engagement. This also means that Guyanese banks should design user-friendly interfaces and offer customer support tools to reduce user frustration and encourage long-term engagement.

Given the findings in this study, the following suggestions are warranted for commercial banks in Guyana. Firstly, commercial banks should ensure that their Internet banking systems are always available to process consumer requests and resolve issues since there is a positive association between service quality and perceived ease of use of Internet banking. Secondly, commercial banks should provide supplementary customer training support to enhance customers' computer self-efficacy to utilise Internet banking services given the impact that computer self-efficacy has on the perceived usefulness of adopting Internet banking. The training could increase customers' self-confidence in using the technology which would subsequently increase their perceived utility value to be derived from same. Lastly, given the positive relationships on perceived ease of use, perceived usefulness and actual usage of Internet banking, banks must work to improve areas of their banking platforms including but not limited to user interface and experience, personalization, speed and reliability, accessibility and 24/7 customer support.

These strategies should be tailored to local user behaviours and digital skills, ensuring that people in both urban and rural areas can access digital banking tools.

By improving services based on the specific needs of Guyanese customers, banks can build trust, usability, and lasting engagement with digital platforms. This study also highlights the importance of user-focused design and skills development when using digital banking platforms in developing countries. Understanding such barriers for technology uptake can help shape policy and further investment in digital financial systems domestically and regionally.

While the findings of the study offer valuable insights, the limitations of same must be recognized. The sample included users from just six major banks in Guyana and used purposive sampling, which may limit how applicable the results are to the larger population. Also, the study's cross-sectional design did not consider changes in behaviour over time. Future research could interrogate the issue of internet banking adoption at small and medium size banks locally. This can expand the relevance of this study's findings while filling a contextual gap of different financial, technological and regulatory challenges. Also, research into how other factors such as trust, internet access, and user attitudes toward data security affect adoption, especially in rural or underserved areas, can help inform more targeted strategies for increasing adoption in a broader set of contexts. Long-term studies would also help us understand how user perceptions change as they interact more with digital banking platforms. Lastly, comparing this study's findings to those across other Caribbean or South American developing countries can help to strengthen the study's validity while extending the applicability of the findings across the geographic space.

4. CONCLUSION

This research aimed to investigate the factors affecting the adoption of Internet banking by customers in a Guyanese context. A conceptual model that extends the Technology Acceptance Model was proposed and evaluated using structural equation modelling. The proposed conceptual model's study yielded findings that both correlated and contradicted the literature in the field of Internet banking adoption. The study was able to uncover the factors that have a significant impact on customers' use of Internet banking. The findings suggest that service quality positively affects consumers' perceived ease of use of Internet banking but not the perceived usefulness of same. It was also found that computer self-efficacy positively affects consumers' perceived usefulness to adopt Internet banking but not perceived ease of use. The study showed that information quality did not impact perceived usefulness. Similarly, service quality did not impact the perceived ease of use to adopt Internet banking. However, the findings suggest that both perceived ease of use and perceived usefulness have significantly impacted the actual usage of Internet banking. These findings offer useful insights for commercial banks in Guyana. They may also serve as a guide for financial

institutions in other developing countries that have similar levels of digital maturity.

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