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Determinants of the Extent of Accounting Information System Adoption among Small and Medium Enterprises: Empirical Evidence from the Eastern Province, Sri Lanka

M. B. M. Irshad
Department of Management and Information Technology
South Eastern University of Sri Lanka
mbmirshad@seu.ac.lk

ABSTRACT

Accounting Information Systems (AIS) can strengthen the accuracy, timeliness and usefulness of financial information in Small and Medium Enterprises (SMEs), yet many SMEs in developing regions use such systems only partially. This study examines the determinants of the extent of AIS adoption among SMEs in the Eastern Province of Sri Lanka (Ampara, Batticaloa and Trincomalee districts), a region still recovering from protracted conflict and from the post-COVID-19 economic crisis. Drawing on an integration of the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT) and the DeLone and McLean IS Success Model, the study tests four hypothesised determinants: perceived usefulness (PU), social influence (SI), system quality (SQ) and information quality (IQ). A cross-sectional survey was administered to 382 owner-managers of SMEs that had already introduced accounting software, recruited through non-probability convenience sampling. Construct structure and reliability were assessed with exploratory factor analysis and Cronbach's alpha, and the hypotheses were tested with ordinary least squares multiple regression, supported by Pearson correlation analysis and multicollinearity diagnostics. The model explained 48.9% of the variance in the extent of AIS adoption (adjusted $R^2 = .484$; $F(4, 377) = 90.22$, $p < .001$). All four determinants were positively and significantly associated with the extent of adoption ($p < .001$): PU had the largest standardised coefficient ($\beta = .314$), followed by SI ($\beta = .302$), SQ ($\beta = .242$) and IQ ($\beta = .171$). An importance–performance analysis further identified low perceived usefulness and weak system quality as the principal perception-based barriers to deeper adoption. The findings offer guidance to AIS vendors, policy makers and business associations seeking to deepen AIS use among SMEs in resource-constrained, post-conflict regions.

Keywords: Accounting Information Systems; extent of AIS adoption; SMEs; Technology Acceptance Model; UTAUT; DeLone and McLean Model; importance–performance analysis; Eastern Province; Sri Lanka

©Faculty of Management and Commerce
South Eastern University of Sri Lanka (SEUSL)
University Park, Oluvil 32360, Sri Lanka.

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1. INTRODUCTION

Information technology has changed the competitive character of business across the globe and has pressed firms of every size to digitise their financial and operational processes. Accounting Information Systems (AIS) are central to this transition. By combining accounting procedures with information technology, AIS automate transaction processing, financial reporting, payroll and regulatory compliance, and thereby provide more accurate, timely and decision-relevant financial information [10], [11]. For Small and Medium Enterprises (SMEs), which typically operate with limited resources and managerial capacity, effective use of AIS is not merely a technology upgrade but an enabler of operational resilience and growth.

SMEs are the backbone of economic activity worldwide; an estimated 358 million SMEs operate globally [15]. In Sri Lanka, SMEs account for about 75% of enterprises, around 45% of employment and an estimated 52% of gross domestic product [4]. The listing phase of the Economic Census 2013/14 enumerated approximately 1.02 million non-agricultural establishments in the country, 99.8% of which were micro, small or medium-sized [12]. The sector was, however, severely affected by the COVID-19 pandemic and the subsequent economic crisis, and the Department of Census and Statistics [13] reports a substantial decline in the number of active MSMEs across the provinces. These developments increase the importance of digital financial tools that support efficiency, record-keeping and access to finance during recovery.

There is no universally accepted definition of SMEs in Sri Lanka. Different institutions apply different criteria, such as the number of employees, capital invested, value of assets or turnover, according to their purposes, and these criteria are not mutually consistent [2], [12]. Table 1 summarises the definitions used by various Sri Lankan authorities.

Table 1: Definitions of SMEs in Sri Lanka

Institution	Criterion	Medium Scale	Small Scale
Sri Lanka Standards Institution (SLSI)	No. of Employees	Between 50 - 249	Less than 50
Industrial Development Board (IDB)	Value of Machinery	Between Rs. 4 Million to 10 Million	Less than Rs. 4 Million
Ministry of Industry, Tourism and Investment Promotion	Value of fixed assets other than land and buildings	Up to Rs. 16 Million	Less than Rs. 16 Millions
Federation of Chambers of Commerce and Industry of Sri Lanka	Capital employed	Between Rs.2 Million to 20 Million	Less than Rs. 2 Million
Ministry of Small and Rural Industries	Total Investment	Between Rs. Million 20 to 50 Million	Between Rs. 1 Million to 20 Million
Ceylon National Chamber of Industries	i) Value of assets other than buildings and lands. ii) No. of employees	Between Rs. 4 Million to Rs. 20 Million Between 10 -50	Less than Rs. 4 Million Less than 10
Sri Lanka Export Development Board (EDB)	i) Capital investment excluding lands and building ii) Annual export	More than Rs. 40 Million More than Rs. 100 Million	Less than Rs. 20 Million Less than Rs. 100 Million

	turnover		
World Bank (for Sri Lankan country studies and loan programmes)	No. of employees	Between 50-99	Less than 1- 49
Dept. of Census and Statistics	No. of Employees	More than 25 (Year 2000) More than 10 (Year 2003/04)	Less than 25 (Year 2000) Less than 10 (Year 2003/04)
Task Force for SMEs Development in Sri Lanka (2002)	Asset Value excluding land and buildings value	Not exceeding more than Rs. 50 Million	Not exceeding more than Rs. 20 Million
Sri Lankan Apparel Industry, Task force on five-year strategy (2002)	i) Export value ii) No. of Employees	Rs. 101 Million to 250 Million 1 - 100	Rs. 0.25 Million to 100 Million 101 - 250
The Dept. of Small Industries	i) Capital investment ii) No. of Employees	Between Rs. 25 – 5 million Between 100 - 50	Less than Rs. 5 Million Less than 50 employees

Source: Dasanayaka [8].

For national policy purposes, the Sri Lankan government classifies enterprises by staff size and annual turnover: micro enterprises have up to 10 employees or a turnover of up to Rs. 25 million, small enterprises 11–50 employees or a turnover of up to Rs. 250 million, and medium enterprises 51–300 employees or a turnover of up to Rs. 750 million. This study follows this classification; its definition of SMEs therefore includes micro enterprises.

The Eastern Province, which comprises the Ampara, Batticaloa and Trincomalee districts, offers a distinctive setting for AIS research. The Economic Census 2013/14 recorded 76,250 non-agricultural establishments in the three districts, about 95% of which were micro enterprises [12]. Although digital infrastructure has improved progressively since the end of the civil conflict, formal record-keeping remains limited: at the time of the census only about 35% of establishments island-wide, and roughly a quarter of micro establishments, recorded their business transactions [12]. Enterprises in the region face constraints commonly reported in the AIS literature, including limited technical capacity, the predominance of English-language accounting software in a largely Tamil- and Sinhala-speaking business community, resistance to process change, high initial investment costs and limited local technical support [24], [1]. Consequently, even SMEs that have introduced accounting software may use it only for basic functions.

Prior research on AIS adoption among SMEs comes mainly from other national settings, such as China, Ethiopia and Somalia [40], [35], [1], and Sri Lankan studies have largely examined other districts, larger organisations or the banking sector [17], [26], [19]. Little attention has been paid to the socio-economic, linguistic and post-conflict conditions of the Eastern Province. Moreover, most studies model adoption as a binary decision; far less is known about what drives the extent to which firms that have already introduced AIS actually use it, even though shallow use limits the benefits that AIS can deliver [11], [28]. This study addresses these gaps by examining, within an integrated model drawn from TAM [9], UTAUT [38] and the DeLone and McLean IS Success

Model [10], [11], four determinants of the extent of AIS adoption: perceived usefulness, social influence, system quality and information quality.

The study has two objectives. The first is to examine the relationships between perceived usefulness, social influence, system quality and information quality and the extent of AIS adoption among SMEs in the Eastern Province. The second is to identify which of these determinants constitute the most pressing perceived barriers to deeper AIS adoption, by considering jointly each determinant's importance in explaining adoption and respondents' current assessment of it. Two research questions follow. RQ1: Which of the four determinants are significantly associated with the extent of AIS adoption, and what is their relative importance? RQ2: Which determinants represent the principal perceived barriers to deeper adoption, and what priorities do they imply for SMEs, vendors and policy makers? The study focuses on the determinants of adoption; the consequences of AIS adoption for operational performance lie outside its scope and are identified as a direction for future research.

The remainder of the paper is organised as follows. Section 2 reviews the theoretical and empirical literature and develops the hypotheses. Section 3 describes the methodology, Section 4 presents the results and Section 5 discusses them. Section 6 concludes with the contributions, recommendations, limitations and directions for future research.

2. LITERATURE REVIEW

Three complementary theoretical frameworks inform this study. Each is reviewed below, after which Section 2.5 explains how they are integrated and why four constructs were selected.

2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model proposed by Davis [9] posits that technology use is determined largely by two beliefs: perceived usefulness, the degree to which a person believes that using a system will enhance his or her job performance, and perceived ease of use, the degree to which using the system is expected to be free of effort. These beliefs shape behavioural intention, which in turn predicts actual use. TAM2 [37] added social and cognitive-instrumental determinants such as subjective norm, image and result demonstrability, and TAM3 [36] incorporated antecedents of ease of use such as computer self-efficacy and computer anxiety. In AIS research, TAM has frequently been applied to SMEs, and perceived usefulness has repeatedly emerged as an important predictor of adoption [1], [24], [40].

2.2 DeLone and McLean IS Success Model

DeLone and McLean [10], [11] proposed a multidimensional model of information systems success comprising system quality, information quality, service quality, use (or intention to use), user satisfaction and net benefits. System quality refers to the technical characteristics of the system, such as reliability, availability, response time and ease of use, whereas information quality refers to the accuracy, timeliness, completeness and relevance of the system's outputs [28]. Empirical tests have repeatedly supported the importance of these two quality dimensions [30], [34]. Importantly for the present study, the model treats system and information quality as

antecedents of use, and use in turn as a precursor of net benefits [11], [33]. The two quality dimensions can therefore be modelled as determinants of the extent of AIS adoption without conflating adoption with IS success as an outcome.

2.3 Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh et al. [38] synthesised eight earlier adoption models into UTAUT, which identifies performance expectancy, effort expectancy, social influence and facilitating conditions as the principal determinants of behavioural intention and use. UTAUT has since been widely replicated and extended, and a meta-analytic re-examination has confirmed the relevance of its core constructs across technologies and settings [14]. Social influence, defined as the degree to which an individual perceives that important others believe he or she should use the system [38], is particularly relevant to SMEs, whose owner-managers often rely on peers, customers, suppliers, accountants and business networks rather than on formal information sources when evaluating new technology.

2.4 Empirical Evidence on AIS Adoption Determinants

Empirical research increasingly documents the factors that facilitate or hinder AIS adoption. Perceived usefulness is among the most consistently supported determinants. Tilahun [35] found that perceived efficiency and decision-making benefits were associated with the adoption of computerised AIS by hospitals in Addis Ababa, Ethiopia; Zhang [40] reported that perceived usefulness was significantly associated with the use of computerised accounting systems among accountants of small and micro businesses in Xi'an, China; and Abdinur and Karcioglu [1] reported similar evidence for SMEs in Somalia. Social influence has received less attention in AIS studies, but the UTAUT literature shows that it is a significant, if typically weaker, determinant of intention and use [38], [14]. System and information quality have also been examined extensively. Haleem and Kevin [19] found user competency and system-related factors to be important for AIS success in the Sri Lankan banking sector, and Hendriks [20] identified system deficiencies and staff competency gaps as major barriers to implementing financial management information systems in the South African public sector.

In Sri Lanka, research has linked AIS to organisational outcomes. Gamlath [17] reported that characteristics of accounting software were associated with the business performance of SMEs in the Kurunegala District, and Nazar [26] examined the factors affecting the effectiveness of AIS in public listed companies. More broadly, Roztocki and Weistroffer [32] emphasise that ICT adoption in developing economies must be understood in relation to its socio-economic context. However, research on SMEs in the Eastern Province, and particularly in the post-conflict districts of Trincomalee, Batticaloa and Ampara, remains scarce.

2.5 Theoretical Integration, Construct Selection and Hypotheses

The three frameworks are integrated here on the basis of an explicit theoretical logic rather than as a simple aggregation of variables. Following Wixom and Todd [39], who reconciled the user-satisfaction (IS success) and technology-acceptance research streams, the constructs can be organised into two families of beliefs. Object-based beliefs concern the characteristics of the system itself; system quality and information quality are drawn from the DeLone and McLean

model [11]. Behavioural beliefs concern the consequences of using the system and the social expectations surrounding its use; perceived usefulness is drawn from TAM [9] and social influence from UTAUT [38]. TAM thus contributes the outcome belief that has proved most robust in AIS research, UTAUT contributes the normative belief that is absent from the original TAM, and the DeLone and McLean model contributes the system-level quality beliefs that TAM and UTAUT treat only implicitly. In this synthesis the quality dimensions are antecedent beliefs, and the dependent construct, the extent of AIS adoption, corresponds to the use dimension of the DeLone and McLean model rather than to IS success as an outcome [11], [33].

The four constructs were selected for parsimony and to avoid conceptual overlap. Performance expectancy in UTAUT was derived from, and is conceptually equivalent to, perceived usefulness [38], so only perceived usefulness was retained. Perceived ease of use (effort expectancy in UTAUT) was not modelled separately because ease of use is a core facet of system quality in DeLone and McLean-based measurement [28] and because the effect of effort expectancy weakens as users gain experience [38]; all respondents in this study had used their software for at least one year. Facilitating conditions and service quality were excluded because they capture organisational resources and vendor support that are better examined at the firm level, and because most respondents used packaged, off-the-shelf software. User satisfaction and net benefits were excluded because they are consequences rather than determinants of adoption [11]. These exclusions are acknowledged as limitations in Section 6.4. Although Wixom and Todd [39] propose that object-based beliefs also operate indirectly through behavioural beliefs, the present study tests only the direct associations shown in Figure 1; mediation is identified as a direction for future research.

In summary, three gaps motivate this study: evidence from the post-conflict, linguistically diverse Eastern Province is scarce; few studies examine perceived usefulness, social influence, system quality and information quality together in a single, theoretically integrated model for Sri Lankan SMEs; and the extent of adoption among existing AIS users has received less attention than the initial adoption decision. The resulting conceptual model is shown in Figure 1, and the hypotheses are stated below.

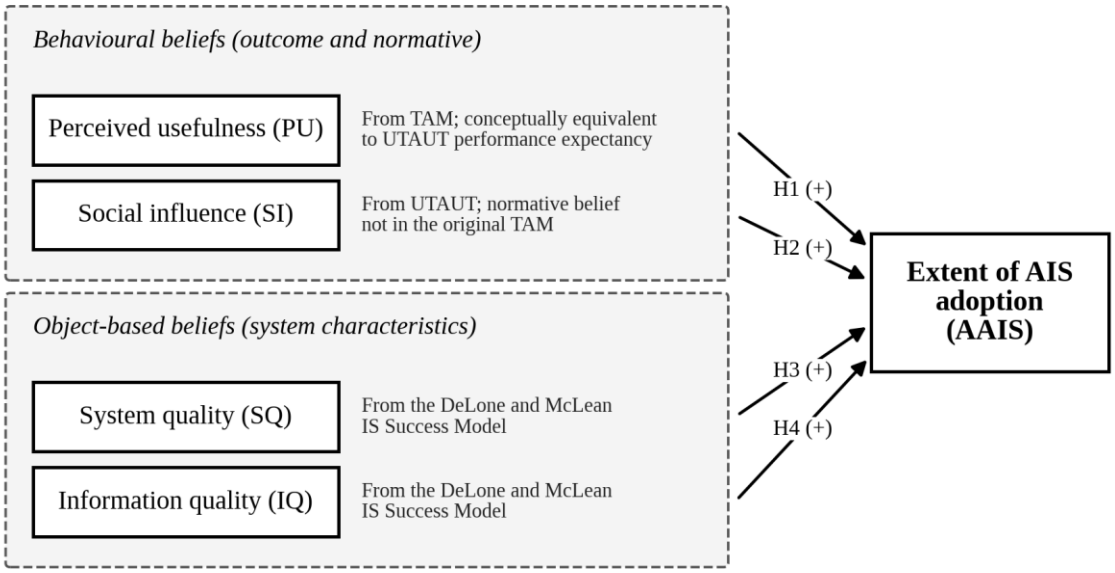


Figure 1: Conceptual model integrating TAM, UTAUT and the DeLone and McLean IS Success Model

Note: Arrows denote the hypothesised positive associations tested in this study. Constructs are grouped by belief type following Wixom and Todd [39].

H1: Perceived usefulness is positively associated with the extent of AIS adoption among SMEs.

H2: Social influence is positively associated with the extent of AIS adoption among SMEs.

H3: System quality is positively associated with the extent of AIS adoption among SMEs.

H4: Information quality is positively associated with the extent of AIS adoption among SMEs.

3. RESEARCH METHODOLOGY

3.1 Research Design

The study adopted a cross-sectional, quantitative survey design consistent with the positivist position that dominates survey-based IS adoption research [7]. A quantitative approach was appropriate because the aim was to test theoretically derived hypotheses about the associations between perceived usefulness, social influence, system quality, information quality and the extent of AIS adoption. Because the design is cross-sectional and observational, the results are interpreted as associations rather than causal effects.

3.2 Population, Sampling Frame and Sample Size

The target population comprised owner-managers of SMEs in the Ampara, Batticaloa and Trincomalee districts that had already introduced computerised accounting software. No official register of SMEs, and no list of AIS-using SMEs, is available for these districts. The most recent complete official enumeration is the listing phase of the Economic Census 2013/14, which the Department of Census and Statistics conducted through the Divisional Secretariat and Grama

Niladhari network and which recorded 76,250 non-agricultural establishments in the three districts (Table 2) [12]. Because the number of AIS-using SMEs is necessarily smaller than this total, the census figure was treated as a conservative upper bound for the population size.

The sample size was determined for a 95% confidence level, a 5% margin of error and maximum variability ($p = 0.5$) using Cochran's formula with a finite population correction [5], which also underlies the Krejcie and Morgan table [23]. For $N = 76,250$ this gives $n = 382$, which is identical to the Krejcie and Morgan value for a population of 75,000. The required sample size is insensitive to the exact population figure: it ranges only from 377 to 384 for any population above 20,000. The uncertainty about the current number of SMEs, including the post-pandemic decline reported by the Department of Census and Statistics [13], and about the number of AIS users therefore does not materially affect the adequacy of the sample. For the regression model, an a priori power analysis (G*Power 3.1 [16]) showed that 129 respondents would be required to detect a medium effect ($f^2 = 0.15$) with four predictors at $\alpha = .05$ and power = .95; the achieved sample of 382 comfortably exceeds this requirement.

Table 2: Non-Agricultural Establishments in the Study Districts and Proportional Allocation of the Sample

District	Establishments (Economic Census 2013/14)	Share of province (%)	Micro / Small / Medium / Large (%)	Proportional allocation of n = 382
Batticaloa	29,135	38.2	94.9 / 4.7 / 0.4 / 0.0	146
Ampara	30,550	40.1	94.9 / 4.7 / 0.4 / 0.0	153
Trincomalee	16,565	21.7	94.6 / 4.9 / 0.3 / 0.1	83
Total	**76,250**	**100.0**	–	**382**

Source: Department of Census and Statistics [12], Tables 2.1.3 and 5.3.3. Size classes follow the census definitions based on persons engaged.

Respondents were eligible if they (a) owned or managed an enterprise located in one of the three districts that met the SME definition given in Section 1, (b) were directly responsible for the enterprise's financial management or accounting decisions, and (c) the enterprise was using computerised accounting software, such as point-of-sale (POS) software with accounting functions, Sage, QuickBooks or an ERP system. Because no sampling frame of eligible enterprises exists, respondents were recruited through non-probability convenience sampling and the data was collected from business premises in the main commercial towns of each district and at chamber of commerce meetings. Data collection was spread across the three districts with the aim of approximating their shares of establishments (Table 2). Convenience sampling cannot, however, guarantee representativeness or proportional representation, and the achieved number of respondents in each district cannot be reported because the raw survey data were not available for re-analysis at the revision stage. The findings should therefore be generalised with caution.

3.3 Measurement Instrument

The questionnaire had two parts. Part A recorded respondent and enterprise characteristics: gender, age, education, sector, number of employees, years in operation, type of accounting software and years of software use. Part B measured the five constructs with 23 items rated on

five-point Likert scales (1 = strongly disagree, 5 = strongly agree), adapted from established instruments as summarised in Table 3; the full item wording is given in Appendix A. The dependent construct, the extent of AIS adoption (AAIS), is defined as the extent to which the enterprise uses its AIS for recording transactions, reporting, control and decision-making. It therefore measures the depth of adoption among existing users rather than the decision to adopt, which is appropriate because all respondents were existing AIS users. Construct scores were computed as the mean of their items.

Table 3: Constructs, Definitions and Sources of the Measurement Scales

Construct	Definition used in this study	Items	Adapted from
Perceived usefulness (PU)	Degree to which the owner-manager believes that using the AIS improves the enterprise's financial management and performance	5	Davis [9]
Social influence (SI)	Degree to which important others (peers, customers, suppliers, accountants and business networks) expect the enterprise to use the AIS	5	Venkatesh et al. [38]
System quality (SQ)	Perceived reliability, availability, response time, flexibility and ease of use of the AIS	5	DeLone and McLean [11]; Rai et al. [30]; Petter et al. [28]
Information quality (IQ)	Perceived accuracy, timeliness, completeness and relevance of the AIS outputs	5	DeLone and McLean [11]; Rai et al. [30]
Extent of AIS adoption (AAIS)	Extent to which the enterprise uses the AIS for transaction recording, reporting, control and decision-making	3	[1]
Total		**23**	

[AUTHOR: confirm the number of items per construct (5, 5, 5, 5 and 3), confirm or correct the source of each scale, including the AAIS scale, and provide the full English wording of all items in Appendix A.]

3.4 Translation, Content Validity and Pilot Test

The questionnaire was prepared in English and translated into Tamil and Sinhala to remove language barriers for respondents. Two bilingual translators produced independent forward translations, which were back-translated into English by a third translator; discrepancies were resolved by the research team [3]. Content validity was assessed by two IS academics and two practising SME consultants. The instrument was then pilot-tested with 30 owner-managers, which led to minor adjustments to item wording and the pilot respondents were excluded from the main sample. Questionnaires were administered in person, and assistance was provided to respondents who requested clarification of items, without suggesting answers.

3.5 Data Screening and Missing Data

Of the 400 questionnaires distributed, 390 were returned, and 382 complete responses were retained for analysis. The rest of the questionnaire were not considered due to incomplete responses.

3.6 Ethical Considerations

The study was approved by the Ethics Committee of the South Eastern University of Sri Lanka. Participation was voluntary, and informed consent was obtained from all participants verbally and confidentiality were protected.

3.7 Data Analysis

The analysis was carried out in Python (pandas, NumPy, SciPy, statsmodels, scikit-learn and Matplotlib) in four steps. First, exploratory factor analysis (principal component extraction with Varimax rotation), the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity were used to examine construct structure, and Cronbach's alpha to assess internal consistency. Second, Pearson correlations were computed among the composite scores. Third, the hypotheses were tested with ordinary least squares (OLS) multiple regression including an intercept. Multicollinearity was assessed with variance inflation factors (VIFs) computed from auxiliary regressions that include a constant. Ninety-five per cent confidence intervals, computed from the coefficients and their standard errors, are reported for all coefficients. The raw survey data were not available for re-analysis at the revision stage, so residual-based checks of the regression assumptions (linearity, normality, homoscedasticity and influential observations) could not be carried out; this is acknowledged as a limitation (Section 6.4). Fourth, to address the second objective, an importance–performance map analysis [31] combined each determinant's unstandardised regression coefficient (importance) with its mean score rescaled to 0–100 (performance), and one-sample t-tests compared each construct mean with the scale midpoint of 3. Statistical significance was evaluated at $\alpha = .05$, and p-values below .001 are reported as $p < .001$.

4. RESULTS AND ANALYSIS

4.1 Profile of Respondents and Enterprises

Table 4 summarises the profile of the 382 respondents. Female owner-managers formed a slight majority (56.0%), and most respondents were aged 26–55 years (82.7%). Just over half had completed the GCE Advanced Level (53.1%) and 45.8% the GCE Ordinary Level, while only 1.0% held a bachelor's degree. The largest group of enterprises employed 1–10 persons (47.6%), and trading (40.8%) and manufacturing (40.3%) were the dominant sectors. All respondents were existing AIS users, in line with the eligibility criteria. POS software was the most common system (59.7%), followed by Sage (24.9%) and QuickBooks/FreshBooks (12.0%), whereas only 3.4% used an ERP system such as SAP; 50.5% had used their software for two years or less. The predominance of POS systems, which mainly capture sales transactions, suggests that many enterprises use AIS for basic transaction recording rather than for integrated accounting and reporting, a point examined further in Section 4.5. The female majority differs from the national census pattern, in which about a quarter of establishments had a female main decision-maker [12], and may reflect the convenience sampling procedure.

Table 4: Profile of Respondents and Enterprises (n = 382)

Variable	Category	Frequency	Percentage
Gender	Male	168	44.0%
	Female	214	56.0%
Age	Below 25	13	3.4%
	26-35	101	26.4%
	36-45	116	30.4%
	46-55	99	25.9%

	Above 55	53	13.9%
Education	GCE O/L	175	45.8%
	GCE A/L	203	53.1%
	Bachelor	4	1.0%
SME Type	Manufacturing	154	40.3%
	Service	69	18.1%
	Trading	156	40.8%
	Artist/Agriculture	3	0.8%
Employees	1-10	182	47.6%
	11-25	155	40.6%
	26-50	45	11.8%
Years in Business	Less than 1	41	10.7%
	1-5	114	29.8%
	6-10	123	32.2%
	More than 10	104	27.2%
Software	POS	228	59.7%
	Sage	95	24.9%
	ERP/SAP	13	3.4%
	Quickbooks/Freshbooks	46	12.0%
Software Usage	1 year	112	29.3%
	2 years	81	21.2%
	3 years	56	14.7%
	4 years	89	23.3%
	5+ years	44	11.5%

4.2 Exploratory Factor Analysis and Reliability

Exploratory factor analysis was applied to the 23 measurement items of the five constructs, namely perceived usefulness (PU), social influence (SI), system quality (SQ), information quality (IQ) and the extent of AIS adoption (AAIS), using principal component extraction with Varimax rotation. Sampling adequacy and factorability were assessed first (Table 5).

Table 5: Sampling Adequacy and Factorability Tests

Test	**Value**	**Interpretation**
Kaiser–Meyer–Olkin (KMO) measure	0.895	Meritorious sampling adequacy (0.80–0.89) [21]
Bartlett's test of sphericity	$\chi^2 = 2917.85$, df = 253, $p < .001$	Correlation matrix is factorable

The KMO value of 0.895 lies in the 'meritorious' range (0.80–0.89) described by Kaiser [21] and exceeds the minimum of 0.50 recommended by Hair et al. [18]. Bartlett's test of sphericity was significant ($\chi^2 = 2917.85$, df = 253, $p < .001$), showing that the correlation matrix is not an identity matrix. The data were therefore suitable for factor analysis.

Table 6: Eigenvalues and Variance Explained

Component	Eigenvalue	Variance explained (%)	Cumulative (%)
1	6.2462	27.09	27.09
2	2.3221	10.07	37.16
3	2.1179	9.18	46.34
4	1.8567	8.05	54.39
5	0.9080	3.94	58.33

Note: Unrotated principal components. Component 5 has an eigenvalue below 1.0 and was retained on the a priori criterion (see text).

As Table 6 shows, four components had eigenvalues greater than 1.0, while the fifth had an eigenvalue of 0.908, below the latent-root (Kaiser) criterion. Because the instrument was designed to measure five theoretically specified constructs, a five-component solution was nevertheless extracted on the a priori criterion [18]. The rotated item loadings are not reported because the raw data were not available for re-analysis at the revision stage; confirmatory factor analysis is therefore recommended to establish the item-level structure (Section 6.4). The five components together explained 58.33% of the total variance. This is slightly below the 60% level that Hair et al. [18] describe as commonly regarded as satisfactory in the social sciences, although they note that solutions explaining somewhat less variance are sometimes accepted in this field. The marginal fifth eigenvalue and the proportion of variance explained are therefore acknowledged as limitations of the measurement model. The first unrotated component accounted for 27.09% of the variance, well below 50%, which suggests that a single common-method factor does not dominate the data; this Harman single-factor test is, however, only a coarse indicator [29].

Table 7: Cronbach's Alpha Reliability Analysis

Construct	Cronbach's alpha	Reliability level
Perceived usefulness (PU)	0.758	Acceptable
Social influence (SI)	0.829	Good
System quality (SQ)	0.811	Good
Information quality (IQ)	0.817	Good
Extent of AIS adoption (AAIS)	0.729	Acceptable

Cronbach's alpha ranged from 0.729 (AAIS) to 0.829 (SI) (Table 7). All values exceed the 0.70 threshold for acceptable internal consistency [27], [18], and three constructs (SI, SQ and IQ) exceed 0.80. The scales therefore show acceptable to good reliability.

4.3 Correlation Analysis

Composite scores were computed as the mean of each construct's items, so that each item contributes equally to its construct score [18]. Table 8 reports the descriptive statistics and Pearson correlations.

Table 8: Descriptive Statistics and Pearson Correlation Matrix

Variable	Mean	SD	1	2	3	4	5
1. PU	2.295	0.528	1.000				
2. SI	2.497	0.616	0.308***	1.000			
3. SQ	2.227	0.587	0.212***	0.336***	1.000		
4. IQ	2.580	0.607	0.182***	0.281***	0.270***	1.000	
5. AAIS	2.481	0.541	0.490***	0.528***	0.457***	0.379***	1.000

Note: n = 382. *** p < .001 (two-tailed). PU = perceived usefulness; SI = social influence; SQ = system quality; IQ = information quality; AAIS = extent of AIS adoption.

The correlations among the four predictors were positive and weak to moderate (r = .182 to .336, all p < .001), well below the level of .85 above which multicollinearity or construct redundancy becomes a concern [22]. Each predictor correlated positively with the extent of AIS adoption (r = .379 to .528, all p < .001). The strongest bivariate association was with social influence (r = .528), followed by perceived usefulness (r = .490), system quality (r = .457) and information quality (r = .379). These bivariate results are consistent with the hypothesised directions; the unique contribution of each determinant is assessed in the regression analysis below. All construct means were below the scale midpoint of 3 (M = 2.227 to 2.580), a pattern examined in Section 4.5.

4.4 Multiple Regression Analysis and Hypothesis Testing

The hypotheses were tested with an OLS regression of the extent of AIS adoption on PU, SI, SQ and IQ, including an intercept. Multicollinearity was checked first. With a constant included in each auxiliary regression, the VIFs ranged from 1.13 to 1.25 (tolerance 0.80 to 0.89; Table 9), far below the conventional thresholds of 5 and 10 [18]. Multicollinearity is therefore not a concern, which is consistent with the modest inter-predictor correlations in Table 8.

Table 9: Multicollinearity Diagnostics

Variable	VIF	Tolerance (1/VIF)	Assessment
PU	1.13	0.886	No concern
SI	1.25	0.801	No concern
SQ	1.18	0.845	No concern
IQ	1.14	0.880	No concern

Note: VIFs computed from auxiliary regressions that include an intercept; they equal the diagonal elements of the inverse of the predictor correlation matrix in Table 8.

Table 10: Multiple Regression Results (Dependent Variable: Extent of AIS Adoption)

Variable	B	SE	β	t	p	95% CI for B
Constant	0.190	0.125	–	1.52	.129	[−0.055, 0.436]
PU	0.322	0.040	0.314	8.03	< .001	[0.243, 0.401]
SI	0.265	0.036	0.302	7.34	< .001	[0.194, 0.336]
SQ	0.223	0.037	0.242	6.05	< .001	[0.151, 0.296]
IQ	0.153	0.035	0.171	4.37	< .001	[0.084, 0.221]

Note: n = 382; df = 377. B = unstandardised coefficient; SE = standard error; β = standardised coefficient; CI = confidence interval. The intercept is not statistically significant.

Table 11: Model Fit Statistics

Statistic	Value
R^2	0.489
Adjusted R^2	0.484
F-statistic	$F(4, 377) = 90.22$, $p < .001$
Effect size (Cohen's f^2)	0.96
Durbin–Watson (reported for completeness only)	2.025

The model was statistically significant, $F(4, 377) = 90.22$, $p < .001$, and explained 48.9% of the variance in the extent of AIS adoption (adjusted $R^2 = .484$; Table 11). The corresponding effect size, $f^2 = R^2/(1 - R^2) = 0.96$, exceeds Cohen's [6] benchmark of 0.35 for a large effect (equivalently, R^2 values of .02, .13 and .26 indicate small, medium and large effects). All four determinants were positively and significantly associated with the extent of AIS adoption ($p < .001$), and none of their 95% confidence intervals included zero (Table 10). Perceived usefulness had the largest standardised coefficient ($\beta = .314$), followed by social influence ($\beta = .302$), system quality ($\beta = .242$) and information quality ($\beta = .171$). Because the confidence intervals of PU and SI overlap substantially, these two determinants should be regarded as of similar importance, while IQ has the smallest coefficient.

Regression diagnostics. Multicollinearity was not a concern (Table 9), and the 95% confidence intervals of all four coefficients exclude zero (Table 10). Because the raw survey data were not available for re-analysis at the revision stage, residual-based checks of linearity, normality, homoscedasticity and influential observations could not be performed, and the coefficients could not be re-estimated with heteroscedasticity-robust standard errors. The estimates should be read with this limitation in mind (Section 6.4). The Durbin–Watson statistic (2.025) is reported for completeness only; because the observations are cross-sectional and have no natural ordering, it provides no information about the other regression assumptions.

Table 12: Summary of Hypothesis Tests

Hypothesis	Association	β	t	p	95% CI for B	Decision
H1	PU → AAIS (+)	0.314	8.03	< .001	[0.243, 0.401]	Supported
H2	SI → AAIS (+)	0.302	7.34	< .001	[0.194, 0.336]	Supported
H3	SQ → AAIS (+)	0.242	6.05	< .001	[0.151, 0.296]	Supported
H4	IQ → AAIS (+)	0.171	4.37	< .001	[0.084, 0.221]	Supported

Note: Two-tailed tests; n = 382. Arrows denote hypothesised associations, not causal effects.

4.5 Perceived Barriers to Deeper AIS Adoption

The second objective was to identify which determinants act as the principal perceived barriers to deeper AIS adoption. Two complementary analyses of the survey responses were used. First, each construct mean was compared with the neutral midpoint of the five-point scale (Table 13). All five means were significantly below 3 ($p < .001$), and the differences were largest for PU ($d = -1.34$) and SQ ($d = -1.32$). On average, respondents therefore assessed the usefulness of their AIS, its technical quality and the quality of its information unfavourably. The low mean for AAIS

(M = 2.481) indicates that adoption among these existing users is shallow, which is consistent with the predominance of basic POS systems in the sample (Table 4).

Table 13: Construct Levels Relative to the Scale Midpoint and Importance–Performance Results

Construct	M (SD)	95% CI of M	t(381) vs 3	Cohen's d	Performance (0–100)	Importance (B)	Priority
PU	2.295 (0.528)	[2.242, 2.348]	−26.10	−1.34	32.4	0.322	1
SQ	2.227 (0.587)	[2.168, 2.286]	−25.74	−1.32	30.7	0.223	2
SI	2.497 (0.616)	[2.435, 2.559]	−15.96	−0.82	37.4	0.265	3
IQ	2.580 (0.607)	[2.519, 2.641]	−13.52	−0.69	39.5	0.153	4
AAIS	2.481 (0.541)	[2.427, 2.535]	−18.75	−0.96	37.0	–	–

Note: All t-tests $p < .001$. $d = (M - 3)/SD$. Performance = $(M - 1)/4 \times 100$. Importance = unstandardised coefficient from Table 10. Priority ranks determinants by high importance combined with low performance. Values are derived from the statistics in Tables 8 and 10.

Second, an importance–performance map analysis [31] was conducted (Figure 2). Importance is the unstandardised regression coefficient of each determinant, which indicates the expected change in the extent of adoption associated with a one-point higher score on that determinant, and performance is the construct mean rescaled to 0–100. Perceived usefulness combines the highest importance (B = 0.322) with the second-lowest performance (32.4), and system quality has the lowest performance of all determinants (30.7) together with moderate importance (B = 0.223). These two determinants therefore represent the principal perceived barriers to deeper adoption: owner-managers do not yet see sufficient practical benefit from their systems, and they judge the systems' reliability, usability and responsiveness unfavourably. Social influence is also important (B = 0.265) but performs somewhat better (37.4), suggesting that encouragement from peers and business networks exists but is not yet strong. Information quality has the highest performance (39.5) and the lowest importance (B = 0.153) and is thus the lowest priority for intervention.

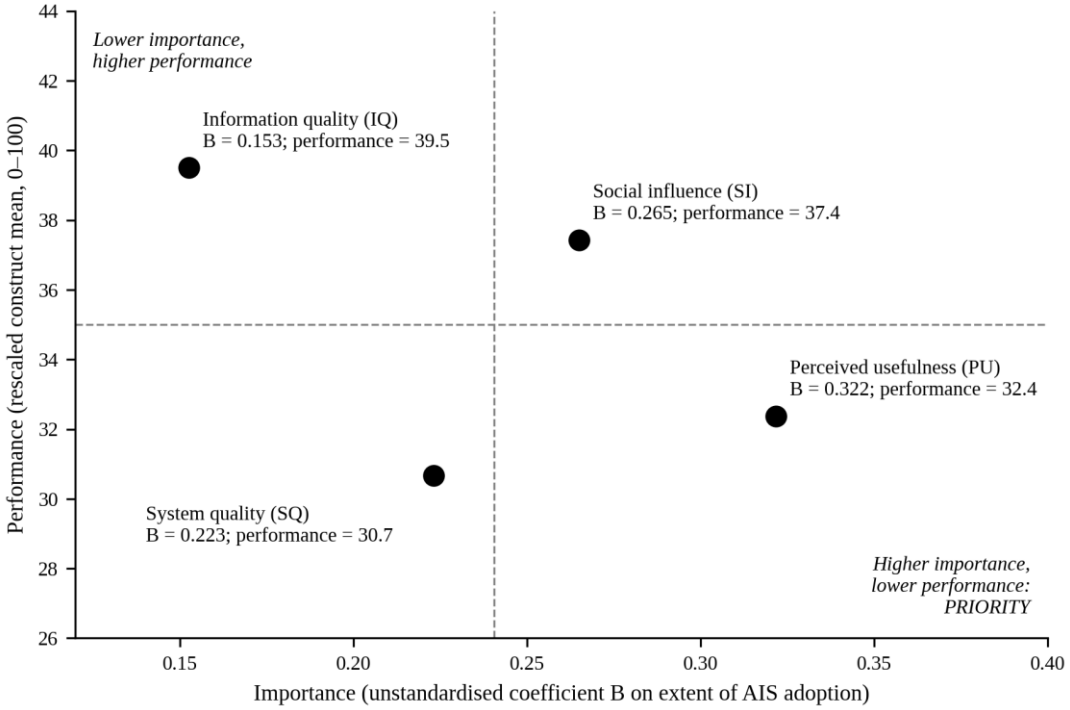


Figure 2: Importance–performance map of the determinants of the extent of AIS adoption

Note: Dashed lines mark the mean importance (0.241) and mean performance (35.0) of the four determinants.

These results answer RQ2 on the basis of the constructs measured in the survey. Barriers that were not measured directly, such as software cost, language and technical skills, are discussed in Section 5 with reference to the literature and are identified as a direction for future research.

5. DISCUSSION

The results support all four hypotheses: perceived usefulness, social influence, system quality and information quality are each positively associated with the extent of AIS adoption among SMEs in the Eastern Province, and together they explain almost half of its variance. These findings are consistent with the theoretical expectations of TAM, UTAUT and the DeLone and McLean model, but the relative size of the coefficients also reveals context-specific patterns. Because the design is cross-sectional, the associations should not be interpreted as causal effects.

Perceived usefulness had the largest standardised coefficient (β = .314), in line with the central role that TAM assigns to this belief [9] and with prior AIS studies in other developing economies [1], [40]. Its low mean, however, shows that many owner-managers do not yet perceive substantial benefits from the systems they have installed. A plausible explanation is that many respondents use POS systems mainly for sales recording, so that the wider benefits of AIS, such as management reporting, cost control, tax compliance and support for loan applications, remain unrealised and therefore largely invisible to them. Structured demonstrations of these benefits could raise perceived usefulness and, given its importance, deepen adoption.

Social influence was almost as strong (β = .302), and its bivariate correlation with adoption was the highest of all determinants. This is consistent with UTAUT [38], [14] and with the closely networked, trust-based business communities of the Eastern Province, in which peers, suppliers, customers and accountants are important sources of information about new technology. In such settings, visible use of AIS by respected local business leaders and endorsement by chambers of commerce and trade associations may be effective in encouraging deeper use.

System quality (β = .242) was also a significant determinant, supporting the DeLone and McLean model's emphasis on the technical performance of the system [11]. It had the lowest mean of all constructs, and the importance–performance analysis identified it as the second priority. Where technical support is scarce and connectivity is uneven, system failures and usability problems impose disproportionate costs on small firms. This interpretation is consistent with the importance of system-related factors and user competency reported by Haleem and Kevin [19] and with the system deficiencies identified by Hendriks [20]. Vendors serving this market should therefore prioritise reliability, offline capability, local-language interfaces and accessible after-sales support.

Information quality had the smallest, though still significant, coefficient (β = .171) and the highest mean. One interpretation is that, for firms that use AIS mainly for transaction capture, the accuracy of basic records is taken for granted, whereas the more advanced outputs whose quality matters most for decision-making are not yet widely used. The quality of AIS outputs nevertheless matters for tax compliance and financing decisions [11], and its role may grow as adoption deepens.

Taken together, the behavioural beliefs (PU and SI) had larger coefficients than the object-based beliefs (SQ and IQ). This pattern is consistent with Wixom and Todd's [39] argument that system and information characteristics influence use partly through beliefs about the consequences of use. Testing this mediation formally was beyond the scope of the present model but is an important direction for future work. Finally, the perception-based barriers identified in Section 4.5 are likely to interact with the structural constraints noted in Section 1, such as software cost, the English-language orientation of many packages and limited technical skills [24], [1], [20]. Although these structural constraints were not measured directly, the low proportion of respondents with tertiary education (1.0%) and the predominance of basic POS systems are consistent with them.

6. CONCLUSIONS, CONTRIBUTIONS AND RECOMMENDATIONS

6.1 Conclusions

This study examined the determinants of the extent of AIS adoption among SMEs in the Eastern Province of Sri Lanka, a region shaped by post-conflict recovery, linguistic diversity, limited digital infrastructure and the economic disruption of the COVID-19 period. Drawing on an integration of TAM [9], UTAUT [38] and the DeLone and McLean IS Success Model [10], [11], and on survey data from 382 owner-managers of AIS-using SMEs, the study found that perceived

usefulness, social influence, system quality and information quality are each positively and significantly associated with the extent of AIS adoption. Perceived usefulness and social influence were the strongest determinants, followed by system quality and information quality. With respect to the second objective, low perceived usefulness and weak system quality emerged as the principal perception-based barriers to deeper adoption. The findings extend the evidence on AIS adoption to an under-studied context and shift attention from whether SMEs adopt AIS to how extensively they use it.

6.2 Theoretical Contributions

The study makes three contributions. First, it provides evidence from the Eastern Province of Sri Lanka, extending the contextual scope of TAM, UTAUT and the DeLone and McLean model to a post-conflict, resource-constrained and linguistically diverse setting in which AIS research has been scarce. Second, rather than aggregating variables from different theories, it integrates them through the distinction between behavioural and object-based beliefs [39], showing that both families of beliefs are associated with the extent of adoption and that the behavioural beliefs have the larger coefficients. Third, by modelling the extent of adoption among existing users and combining regression analysis with importance–performance analysis, it shows how adoption models can be used not only to explain adoption but also to identify priorities for deepening it.

6.3 Practical Recommendations

For AIS vendors and technology providers: because perceived usefulness is the most important determinant but is rated low, vendors should demonstrate concrete benefits beyond sales recording, such as simple management reports, tax-ready statements and records that support loan applications. Given the low rating of system quality, they should also invest in reliability, offline functionality, Tamil- and Sinhala-language interfaces, affordable subscription pricing and local after-sales support suited to rural and semi-urban SMEs.

For government and policy makers: agencies responsible for SME development could embed AIS support in SME recovery programmes, for example through subsidised software licences or training vouchers, tax incentives for AIS investment and low-interest digitalisation loans. Official statistics from the Department of Census and Statistics [12], [13] can be used to target such programmes at districts and sectors where record-keeping is weakest.

For chambers of commerce and business associations: given the importance of social influence, associations in the Eastern Province can organise peer-learning networks, practical demonstrations and visible business champions who show how deeper AIS use benefits their enterprises.

For universities and training institutions: business and IT faculties in the Eastern Province can offer practical AIS training in Tamil and Sinhala for owner-managers and accounting staff, covering both technical skills and the managerial uses of AIS information.

6.4 Limitations

The findings should be interpreted in light of several limitations. First, the cross-sectional design supports conclusions about associations but not causality. Second, the non-probability

convenience sample, the use of a 2013/14 census count as the population reference and the female-majority profile of respondents limit the generalisability of the results to all SMEs in the Eastern Province. Third, all variables were self-reported by a single respondent per enterprise, so common method variance cannot be ruled out, although Harman's single-factor test did not indicate a dominant common factor [29]. Fourth, the sample comprised only existing AIS users; the results therefore explain the extent of adoption among adopters and cannot be generalised to the initial adoption decision of non-users. Fifth, the fifth component in the factor analysis had an eigenvalue marginally below 1.0, and the five-component solution explained 58.33% of the variance, so confirmatory testing of the measurement model is warranted. Sixth, residual-based regression diagnostics and heteroscedasticity-robust standard errors [25] and the item-level factor loadings were not reported; future work should archive these checks. Finally, the model deliberately omitted perceived ease of use, facilitating conditions, service quality and firm-level factors, and structural barriers such as cost and language were not measured directly.

6.5 Future Research Directions

Future research could (i) compare adopters with non-adopters so that the initial adoption decision and its extent can be modelled together; (ii) use probability samples drawn from updated business registers maintained by Divisional Secretariats or the Department of Census and Statistics; (iii) apply confirmatory factor analysis or structural equation modelling to validate the measurement model and to test whether object-based beliefs influence adoption through behavioural beliefs [39]; (iv) measure structural barriers such as cost, language and technical skills directly, including through interviews and case studies; and (v) examine the consequences of AIS adoption for operational and financial performance, corresponding to the net-benefits dimension of the DeLone and McLean model [11], preferably with longitudinal designs. Comparative studies across Sri Lankan provinces and other post-conflict economies would further test the generalisability of these findings.

REFERENCES

[1] M. A. Abdinur and R. Karcioglu, "Factors affecting the adoption of accounting information system in small medium enterprises in Somalia," International Journal of Academic Research in Accounting, Finance and Management Sciences, vol. 13, no. 1, pp. 47–65, 2023, doi: 10.6007/IJARAFMS/v13-i1/15923.

[2] A. U. Amaradiwakara and M. M. Gunatilake, "Factors affecting growth of small and medium enterprises in Sri Lanka," Journal of Business & Economic Policy, vol. 3, no. 4, pp. 1–15, 2016.

[3] R. W. Brislin, "Back-translation for cross-cultural research," Journal of Cross-Cultural Psychology, vol. 1, no. 3, pp. 185–216, 1970.

[4] Central Bank of Sri Lanka, Annual Report 2023. Colombo, Sri Lanka: Central Bank of Sri Lanka, 2023. [Online]. Available: https://www.cbsl.gov.lk

[5] W. G. Cochran, Sampling Techniques, 3rd ed. New York, NY, USA: John Wiley & Sons, 1977.

[6] J. Cohen, Statistical Power Analysis for the Behavioral Sciences, 2nd ed. Hillsdale, NJ, USA: Lawrence Erlbaum Associates, 1988.

[7] J. W. Creswell and J. D. Creswell, Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, 5th ed. Thousand Oaks, CA, USA: SAGE, 2018.

[8] S. W. S. B. Dasanayaka, "Small and medium scale enterprises in informal sector in Pakistan and Sri Lanka with research agenda," presented at the Special IARIW-SAIM Conference on Measuring the Informal Economy in Developing Countries, Kathmandu, Nepal, Sep. 2009. [Online]. Available: http://www.iariw.org

[9] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," MIS Quarterly, vol. 13, no. 3, pp. 319–340, 1989, doi: 10.2307/249008.

[10] W. H. DeLone and E. R. McLean, "Information systems success: The quest for the dependent variable," Information Systems Research, vol. 3, no. 1, pp. 60–95, 1992, doi: 10.1287/isre.3.1.60.

[11] W. H. DeLone and E. R. McLean, "The DeLone and McLean model of information systems success: A ten-year update," Journal of Management Information Systems, vol. 19, no. 4, pp. 9–30, 2003, doi: 10.1080/07421222.2003.11045748.

[12] Department of Census and Statistics, Non-Agricultural Economic Activities in Sri Lanka: Economic Census 2013/2014 – Listing Phase. Battaramulla, Sri Lanka: Department of Census and Statistics, 2015. [Online]. Available: http://www.statistics.gov.lk/Economic/Non%20agri.pdf

[13] Department of Census and Statistics, "Impact of the economic crisis on micro, small and medium enterprises (MSMEs) in Sri Lanka," presented at the National Workshop on MSME Statistics, Colombo, Sri Lanka, 2024. [Online]. Available: http://www.statistics.gov.lk

[14] Y. K. Dwivedi, N. P. Rana, A. Jeyaraj, M. Clement, and M. D. Williams, "Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a revised theoretical model," Information Systems Frontiers, vol. 21, no. 3, pp. 719–734, 2019.

[15] E. H. Dyvik, "Number of small and medium enterprises (SMEs) worldwide," Statista, 2023. [Online]. Available: https://www.statista.com

[16] F. Faul, E. Erdfelder, A. Buchner, and A.-G. Lang, "Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses," Behavior Research Methods, vol. 41, no. 4, pp. 1149–1160, 2009, doi: 10.3758/BRM.41.4.1149.

[17] G. R. M. Gamlath, "Impact of characteristics of accounting software on business performance of small and medium scale enterprises in Kurunegala District, Sri Lanka," Sri Lanka Journal of Business Studies, vol. 12, no. 1, pp. 22–38, 2022.

[18] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, Multivariate Data Analysis, 8th ed. Boston, MA, USA: Cengage Learning, 2019.

[19] A. H. Haleem and L. L. T. Kevin, "Impact of user competency on accounting information system success: Banking sectors in Sri Lanka," International Journal of Economics and Financial Issues, vol. 8, no. 4, pp. 72–82, 2018.

[20] C. J. Hendriks, "Integrated financial management information systems: Guidelines for effective implementation by the public sector of South Africa," South African Journal of Information Management, vol. 14, no. 1, Art. 529, 2012, doi: 10.4102/sajim.v14i1.529.

[21] H. F. Kaiser, "An index of factorial simplicity," Psychometrika, vol. 39, no. 1, pp. 31–36, 1974, doi: 10.1007/BF02291575.

[22] R. B. Kline, Principles and Practice of Structural Equation Modeling, 4th ed. New York, NY, USA: Guilford Press, 2016.

[23] R. V. Krejcie and D. W. Morgan, "Determining sample size for research activities," Educational and Psychological Measurement, vol. 30, no. 3, pp. 607–610, 1970, doi: 10.1177/001316447003000308.

[24] Z. Lanlan and A. Ahmi, "Adoption of computerised accounting information systems (CAIS) in small and medium enterprises (SMEs): A review of literature," International Journal of Management and Applied Research, vol. 5, no. 4, pp. 121–136, 2018.

[25] J. S. Long and L. H. Ervin, "Using heteroscedasticity consistent standard errors in the linear regression model," The American Statistician, vol. 54, no. 3, pp. 217–224, 2000, doi: 10.1080/00031305.2000.10474549.

[26] M. C. A. Nazar, "Factors affecting the effectiveness of accounting information systems in public listed companies in Sri Lanka," International Journal of Advanced Multidisciplinary Research, vol. 7, no. 9, pp. 1–6, 2020, doi: 10.22192/ijamr.2020.07.09.001.

[27] J. C. Nunnally and I. H. Bernstein, Psychometric Theory, 3rd ed. New York, NY, USA: McGraw-Hill, 1994.

[28] S. Petter, W. DeLone, and E. McLean, "Measuring information systems success: Models, dimensions, measures, and interrelationships," European Journal of Information Systems, vol. 17, no. 3, pp. 236–263, 2008, doi: 10.1057/ejis.2008.15.

[29] P. M. Podsakoff, S. B. MacKenzie, J.-Y. Lee, and N. P. Podsakoff, "Common method biases in behavioral research: A critical review of the literature and recommended remedies," Journal of Applied Psychology, vol. 88, no. 5, pp. 879–903, 2003, doi: 10.1037/0021-9010.88.5.879.

[30] A. Rai, S. S. Lang, and R. B. Welker, "Assessing the validity of IS success models: An empirical test and theoretical analysis," Information Systems Research, vol. 13, no. 1, pp. 50–69, 2002, doi: 10.1287/isre.13.1.50.96.

[31] C. M. Ringle and M. Sarstedt, "Gain more insight from your PLS-SEM results: The importance-performance map analysis," Industrial Management & Data Systems, vol. 116, no. 9, pp. 1865–1886, 2016, doi: 10.1108/IMDS-10-2015-0449.

[32] N. Roztocki and H. R. Weistroffer, "Conceptualizing and researching the adoption of ICT and the impact on socioeconomic development," Information Technology for Development, vol. 22, no. 3, pp. 363–370, 2016.

[33] P. B. Seddon, "A respecification and extension of the DeLone and McLean model of IS success," Information Systems Research, vol. 8, no. 3, pp. 240–253, 1997, doi: 10.1287/isre.8.3.240.

[34] P. B. Seddon and M.-Y. Kiew, "A partial test and development of DeLone and McLean's model of IS success," Australasian Journal of Information Systems, vol. 4, no. 1, pp. 90–109, 1996, doi: 10.3127/ajis.v4i1.379.

[35] M. Tilahun, "Determinants of computerized accounting information system adoption by hospitals in Addis Ababa, Ethiopia," Strategic Journal of Business & Change Management, vol. 6, no. 1, pp. 189–199, 2019.

[36] V. Venkatesh and H. Bala, "Technology acceptance model 3 and a research agenda on interventions," Decision Sciences, vol. 39, no. 2, pp. 273–315, 2008, doi: 10.1111/j.1540-5915.2008.00192.x.

[37] V. Venkatesh and F. D. Davis, "A theoretical extension of the technology acceptance model: Four longitudinal field studies," Management Science, vol. 46, no. 2, pp. 186–204, 2000, doi: 10.1287/mnsc.46.2.186.11926.

[38] V. Venkatesh, M. G. Morris, G. B. Davis, and F. D. Davis, "User acceptance of information technology: Toward a unified view," MIS Quarterly, vol. 27, no. 3, pp. 425–478, 2003, doi: 10.2307/30036540.

[39] B. H. Wixom and P. A. Todd, "A theoretical integration of user satisfaction and technology acceptance," Information Systems Research, vol. 16, no. 1, pp. 85–102, 2005, doi: 10.1287/isre.1050.0042.

[40] L. Zhang, "The use of computerised accounting systems among accountants on small and micro businesses in Xi'an, Shaan Xi of China," Ph.D. dissertation, School of Business Management, Univ. Utara Malaysia, Sintok, Malaysia, 2017.

APPENDIX A: MEASUREMENT ITEMS

Item Code	Item/Measurement	Source
Perceived usefulness		
PU1	Using AIS improves the efficiency of business operations.	[9],[36],[37], and [38]
PU2	AIS enhances the accuracy of financial reporting.	
PU3	AIS helps in better decision-making for the business.	
PU4	AIS reduces the time required for financial processing.	
PU5	AIS provides useful insights for business growth.	
Social influence		
SI1	My business partners encourage the use of AIS.	[38]
SI2	Competitors' use of AIS influences my decision to adopt it.	
SI3	Government regulations encourage the use of AIS.	
SI4	My employees believe that AIS is beneficial for our business.	
SI5	External consultants or auditors recommend the use of AIS.	
System quality		
SQ1	The AIS system is easy to use.	[10]and[11]
SQ2	The AIS system is reliable.	
SQ3	System responds quickly.	
SQ4	System is flexible to meet our needs	
SQ5	AIS system has all necessary features	
Information quality		
IQ1	AIS provide accurate information	[10]and[11]
IQ2	The information is timely.	
IQ3	The information is relevant to our needs.	
IQ4	Information is easy to understand.	
IQ5	Provide complete information.	
AIS implementation Success		
AIS1	Effectively uses AIS for daily operations.	[1]and [19]
AIS2	AIS has improved accounting process.	
AIS3	AIS has enhanced decision making ability.	