FACTORS INFLUENCING BEHAVIOR INTENTION TOWARDS ACCOUNTING INFORMATION SYSTEM: A STUDY OF SMES IN MALAYSIA

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Abstract. This study focuses on the investigation of the main challenges that affect SME users towards the adoption of accounting information system. The conceptual framework was designed base on the technology acceptance model, technology organization environment model and stakeholder theory. The framework is developed from four major factors: organizational factor, stakeholder factor, technological factor, and external factor. The respective factors are addressed in the sub-section. Organizational readiness and compatibility are included in the organizational factors, management support and accountants are included in stakeholder factors, perceived usefulness and perceived ease of use are included in technological factors, whereas for external factors it contains government agencies and regulations, competitive pressure, and vendor section. Non-probability method is applied in this study, while questionnaires are distributed through email and 106 sets of data are collected from management committees/owners of SME located in Klang Valley, Malaysia. SPSS software tool is used to analyze the data. Descriptive, reliability, correlation and multiple linear regression statistics are employed to test the conceptual framework. The results show that only two factors, namely management support and competitive pressure have significant impact on accounting information system adoption. The finding of this study is useful for government agents, accountants, system vendors and managers in assisting accounting information system adoption.

Keywords: accounting information system, SMEs, organizational factors, stakeholder factors, technological factors, external factors

Introduction

As to any organizations, accounting is an asset as it provides information for users to get across the business operating performance in the financial aspect. An accounting information system (AIS) consists of two elements i.e. accounting information and technology. It has a framework used to collect, store, process and manage data. AIS incorporates the field of accounting information and the field of technology to assist in planning, management and control which relates to the economic financial area of the firm (Soudani, 2012). Essentially, AIS uses IT elements to help the firms accomplish their accounting task.

AIS as an application aligned with computer-based system, represents a modern way in business practice of which, many firms in developing countries find difficult to adopt. (Ganyam and Ivungu, 2019). In the context of determinants of technology implementation in large-scaled firms is less concerned since majority large-scaled firms have adopted information technology successfully. In fact, the use of technology is becoming more crucial to the performances of SME. The priority of SME in Malaysia...
traces back to the early 1970s, Malaysia government carried out a new economy development policy (Saleh and Ndubisi, 2006). Based on the past developments and contributions of SME on Malaysian GDP, SME contribution to the GDP would be expected to achieve 50 percent by 2023 (The star, 2019). Recognizing the potential benefits of SME on the national economy, the government encourages SME to engage in international business. However, since the global economy is structured by technology and knowledge, the effectiveness of information is the key to business survival and developments of SME firms (de Guinea et al., 2005).

On the other hand, in order to satisfy information effectiveness and enable SME to achieve the requirements under the world market competition, investment on accounting technology plays a significant role in the business performance and firms’ innovation character (Dibrell et al., 2008). According to Rahman et al. (2016), one of the variables regarding the survival of SME in Malaysia is positively related to the accounting record system they are using and even if the benefit of implementing AIS has been significantly shown in the business, the intention of SME firms toward adoption of AIS is still doubtful.

To clarify the behavioral intention of SME towards technology adoption is essential for researchers, most of the prior studies are centered on the impact of implementation of AIS (e.g. Fadzilah, 2017; Saira et al., 2010; Ismail and King, 2005), and several existing studies have investigated the adoption of AIS by SMEs in Malaysia (Ali et al., 2012; Ismail, 2009), they have developed their studies from different perspectives, for example, the influence of some internal factors and external factors. However, the study of user’s behavioral intention towards the usage of the technology is still limited which cause lacking attentions by researchers to exam the prospect of user for system effectiveness. Grandon and Pearson (2004) points out that the adoption of information technology is examined by a significant determinant of behavioral intention towards technology. Therefore, it is necessary to investigate factors affecting the behavioral intentions of AIS adoption. The major objective of this study concentrates on investigating behavioral intention of user towards the adoption of AIS. And the following objective of the study have been conducted to identify; (a) the impact of organizational factors on users’ behavioral intention towards AIS adoption among SMEs in Malaysia; (b) the impact of stakeholder factors on users’ behavioral intention towards AIS adoption among SMEs in Malaysia; (c) the impact of technological factors on users’ behavioral intention towards AIS adoption among SMEs in Malaysia; and (d) the impact of external factors on users’ behavioral intention towards AIS adoption among SMEs in Malaysia.

**Literature review**

**Accounting information system definition and importance**

Accounting is “the language of business”, AIS in this case will be the vehicle that provides information of that language. According to Romney and Steinbart (2006), AIS is a system that gathers, records, stores, and processes data to generate information for decision makers. O’Brien and Marakas (2010) states, AIS is a collection of resources, it includes people and equipment, designed to convert financial data into information to communicate with various decision makers. Hurt (2008) states that AIS is a set of interrelated activities, documents, and technologies that collects, processes data and reports information to both internal and external decision makers.
AIS is a subsystem of management information system in an organization. The purpose of AIS is to measure firm’s financial performance and perform organizational accounting functions (Tilahun, 2019). AIS is generally adopted by managers to take strategic action and decisions, and provides financial statements for stakeholders, such as, shareholders, employees, and governments. Accounting information is not only needed by the management but also the shareholders, who need the financial statements to assess business performances (Nnenna, 2012). As for government, they examine the financial statement to ensure that the utilization of the country’s resources is effective. The firm’s managers, specifically the financial manager’s need accounting data generated from AIS to evaluate past performances and plan for future business performance target (Ganyam and Ivungu, 2019). An integration of AIS system increase the effectiveness of management performance, as it combines the component of hardware, software, database, and procedure. Beyond that, to both external and internal stakeholders, integrated AIS improves in information processing, maintain, and communicate information with both sides (Olusola et al., 2013).

Theoretical background

The study of information system adoption is generally conducted with existing theories or models to help researchers analyze the research issues. For example, the technology acceptance model (TAM), is a proven and well-established theory in explaining and examining various issues related to information system. TAM is developed by Davis (1989) to predict the acceptance of new technology, access the linkage of attitude and intentions of its usage. Davis (1993) predicted users’ behavior and indicated how users accept and start to use a technology and put up two fundamental determinants when users are adopting a new technology. TAM model has been used by many previous studies, for instance, Ngadiman et al. (2014) adopted TAM model to build research framework and investigate the determinants of AIS adoption in Syria micro financial institution. The diagram below shows the framework developed by Davis (1989) (Figure 1).

Figure 1. TAM model.

TOE model was developed by Tornatzky et al. (1990), it argues that the adoption of technological innovation is based on three interrelated contexts which are technology, organization, and environment/external. Under each context, there are various variables, of which technology context includes the availability of innovations. The organizational context contains structure of organization, organization resources, and organization competency. The environmental/external context refers to government regulations, vendor support and competition pressure. In addition, Tornatzky et al. (1990) mentioned that the model structured displays threats and opportunities on technological innovation, which indicates the contexts contained in this model reflect firm’s needs and behavior on technology innovation adoption (Figure 2).
Stakeholder theory explains the impact of business entities such as, management committees, employee, and accountants on the outcome of business performance. Stakeholders have been recognized as an important factor for information system project, and it has been incorporated in information system research (Pouloudi, 1999).

**Hypothesis development**

**Organizational factors**

Organizational factors are directly related to the capability and availability of internal resources to implement any specific innovations (Guo and Wu, 2010). It is a key internal factor when a business is determining whether to adopt a new system. Organizational factors include compatibility and organizational readiness.

Compatibility is defined as a system which is productive and smooth in line with organizational structure and it is a capacity of various types of data and technology in a firm (Byrd and Turner, 2000). Compatibility can be distinguished by value or practicality. Value compatibility indicates the suitability of innovation with the culture or the value of firm, whereas practical compatibility refers to the suitability of innovation with current work practices of the firm (Tornatsky et al., 1990). Thus, compatibility requires the alignment of IT innovations and organizational structure through value and practical aspects, to fulfill the job needs in the firm. The importance of a compatible AIS innovation is adjusting data with specific requirement based on the firm unit. By doing this way, it helps firm to avoid wasting time and achieve favorable goals. Romm et al. (1991) states that, an implemented system that is not compatible in terms of values and culture of the organization will result in a costly failure. In a study by Abera (2018), the findings demonstrate that the perceived compatibility of AIS innovation, with the current work procedures and organizational value, has huge impacts on the firms’ decision to adopt AIS.

Organizational readiness represents the degree of a firm in which the firm is ready to execute. It implies that a firm has the ability to start, implement and manage the system enabled strategies. Organizational readiness presents an ongoing process rather than a one-time event, and throughout the life cycle of the firm. When a firm develops and executes the system enabled strategies, it has to ensure that the strategies are highly
linked with the firm’s objectives and goals. According to Weiner (2009), organizational readiness for change is a multi-level construct. Organizational readiness for changes with regards to change commitment among members of organization, and change efficacy which is the shard belief in members’ collective capability to make this change. Organizational readiness is dependent on how much the members value the change, and how the members appraise to the three key determinants of implementation capability: resources availability, situation factors and task demands. Organizational readiness has a direct impact on business performance, which subsequently affects a firm’s survival and growth (Woo, 2014). When organizational readiness is at a high level, members of the firms are most likely to start changing, put in more effort and show a cooperative behavior (Weiner, 2009). Hence, the outcome is a more effective implementation. Chwelos et al. (2001) has conducted an empirical study on IT innovation adoption. They emphasize that organizational readiness is considerably important intention to adoption of the IT innovation. Similarly, Lutf et al. (2016) suggested that organizational readiness is significantly linked to AIS adoption.

**Stakeholder factors**

Stakeholder theory recognizes numerous and various participants in an organization (Freeman et al., 2004; Freeman and McVea, 2001). This study approaches the aspects of stakeholder through two specific groups, which is management teams and accountants. The nature of their positions is identified to investigate their role influence with regards to AIS usage.

Since SMEs have highly centralized and simple structures alongside the CEOs, owner, and the chief manager, which in most cases is the same person. The role of the owner/top management is the central of businesses. Despite external factors like pressure from institutions, management plays an important role in all decision making of a business. A valuable decision made in a firm is usually dependent on the management committee and support received from the top management (John and Juster 2019). Hence, top management committees are considered as the vital human organizations assist in the system innovations. A case study on the influence of management support on AIS by Komala (2012), shows that top management support is the key factor affecting the implementation of AIS. Yusof et al. (2008) found that top management support is the main reason in changing users’ perception and motivates users to use the system. As a result, the usage of AIS is driven through the support of management as it provides authorities from the top management to influence other members.

There is no doubt a successful adoption and developments of AIS require the participation of accountants (Reem and Mohammed, 2014). The relation of accountants and AIS can be captured through the involvement of accountant. Accountants are users of AIS, and they are the first group to lead by example for the others to follow. According to Saedidi et al. (2015), in majority of the firms, accounting functions are the single largest user of information system. As the end-user, accountants have to lay out a clear picture based on their needs to professional AIS designers, that requires accountants to provides a comprehensive view of the current system with regards to the pros and cons and other problems that accountants may be facing during the daily work operation. Likewise, Kassem (2004) mentioned that the accountants shall play an active role in the process of designing system, to achieve internal system effectiveness and meet the needs of AIS users.
Technological factors

The theory of technology acceptance is regarded to be a salient theoretical contribution to understand user’s behavior towards AIS adoption (Davis, 1989). It gives an explanation on factors of technology acceptances which are generally competent of understanding the behavior of user throughout a wide range of end-user computing technologies and user populations. Davis (1993) mentions, the intention of users to accept a system is determined by perception of usefulness and perception on ease of use.

Perceived usefulness, the subjective likelihood of a potential user to use a certain system (e.g., AIS) will enhance user’s performance within an organizational context (Davis, 1989). In other words, it indicates the expected performance of the system. According to Polgar and Adamson (2011): “Perceived usefulness is such a fundamental driver of usage intentions; it is crucial to recognize the determinants of this construct and how they influence changes over time with increasing experience using the system”. The study conducted on user acceptance on G2B system in Malaysia presents that there is significant influence by perceived usefulness and intention to use the system (Sambasivan et al., 2010). Similarly, a study on SMEs in Sri Lanka concludes that an increase in perception on usefulness has a positive influence on the organization’s behavioral intention (Samsudeen and Aliyar, 2015).

Perceived ease of use refers to using a certain system which is free from difficulties and are effortless used (Davis, 1989). Perceived ease of use measures in terms of convenience and the ease of understanding of interactions between its users and system (Davis, 1989). It is believable that if the system is simple without any difficulties to operate, there is an increase in user’s behavioral intention. According to Legrisa (2003), perceived ease of use is one of the most significant factors with respect to explaining on information technology adoption. Azmi and Sri (2015) carried out a study on factors affecting AIS success in Indonesia conclude, the high perception on ease of use will motivate the users using AIS to improve their work performance in line with their organization’s goal. In a similar study, Amin et al. (2016) summarizes that the behavioral intention of employees to adopt AIS is confirmed and highly affected by perceived ease of use.

External factors

On the view of internal factors, according to the study by Al-dmour et al. (2016) factors influencing AIS adoption decisions among SMEs in Jordan, include government agencies and regulations, competitive pressure and vendors shall also be considered.

Shareia (2016) believes that government agencies and regulations is one of the factor that firms will consider when deciding to adopt AIS. Hunton (2002) states, for any business organization, AIS is the main quantitative information system as it provides information for the purpose of internal reporting and external reporting. External reporting users include stockholders, government agencies and other parties. In accordance to Wongsim (2013), financial reporting must pay attention to government requirements since the financial reports of many organizations are required to be addressed by the government for financial affairs. Abdallah (2013) conducted a study on impacts of use of AIS on the quality of financial reporting submitted to tax and sales government agencies in Jordan. The researcher found that the use of AIS has a positive
impact, reflected by the quality of statements submitted to government agencies. Ethics requires professional accountants to comply with law and regulations. Ethic issues arise from the usage of information system within financial and accounting processes (Smith, 2016). For example, authorized users have opportunities to misuse the data and information via AIS system. Hence, it is important to set up a security control to ensure that the data collected is valid, complete, and free from errors (Beard and Wen, 2007).

In order to comply with ethic and regulation requirements, it is necessary to select and adopt an effective and efficient AIS system to limit or minimize the risk in financial and accounting process (Smith, 2016).

One of major part of the external context is the external threat and the adoption of innovations by the competitors (Imre, 2017). SMEs are gradually taking advantages via various information system adoptions as this will improve their competitive advantages. By adopting information system, competitive advantages can be generated through cost reduction and increase product differentiation (Al-dmour et al., 2016). Information system adoption seems to have become an indispensable strategy for firms to keep up with competitions. Abera (2018) found that the decision to adopt AIS is highly influenced by the market competitive pressures. According to Pontikakis et al. (2006), they found that SMEs who perceive their business as highly competitive are six times more likely to adopt the system. Burinskiene and Pipiriené (2013) expressed that firms are more willing to adopt the system when firms are facing great pressures from their business partners, and there are many firms are actively adopting ERP system or other information systems to respond to the competitive pressures.

An appropriate choice of vendor and vendor support is critical in the application of system for SMEs. According to Levy and Powell (2000), most AIS vendors provide complex information system that requires high expertise in information system, however that is beyond the needs of SMEs. Therefore, supports from vendors are extremely important to SMEs. As Thong et al. (1997) mentioned, vendors are the principle external source of information system expertise in terms of system implementation among SMEs. On the other hand, Southern and Tilley (2000) revealed that if vendors develop their marketing strategies and are aware of the problems that SMEs are facing and hence offering training and maintenance service of the system based on the needs of SMEs will largely encourage SMEs to implement their system. External expertise generally plays a mediator role to compensate for the lack of IT knowledge issues in SMEs and lessen the IT knowledge obstacles to achieve an effective and successful implementation (Thong, 2001). Caldeira and Ward (2003) suggested in their study that vendor support is an important factor affecting the success of information system adoption within SMEs. This view reinforced by other studies that a significant relationship has been found between vendor support and information system adoption (Kinuthia, 2014; Chang et al., 2007; Dedrick and West, 2003).

Based on the findings of a previous research, the hypotheses included in this study are below;

H1: Compatibility has positive relationship with AIS adoption
H2: Organizational readiness has positive relationship with AIS adoption
H3: Management support has positive relationship with AIS adoption
H4: Accountants has positive relationship with AIS adoption
H5: Perceived usefulness has positive relationship with AIS adoption
H6: Perception on ease of use has positive relationship with AIS adoption
H7: Government agencies and regulations has positive relationship with AIS adoption
H8: Competitive pressure has positive relationship with AIS adoption
H9: Vendors has positive relationship with AIS adoption

**Conceptual framework**

This study addresses the research gap by considering organization, stakeholder, technological, and external factors based on the TOE model, technology acceptance theory/model and stakeholder to analyze the factors that impact AIS adoption among SMEs (Figure 3).

**Materials and Methods**

**Research design**

In this research, the main objective is to investigate behavioral intentions towards AIS adoption, therefore, this study implements quantitative methodology to respond to the hypotheses and conclude the general results. To study the overall view of the factors affecting the adoption of AIS among SMEs, this study conducts primary data collection in the form of questionnaire design from SMEs located in Klang Valley in Malaysia. The questionnaire was performed online and distributed to the targeted respondents by e-mail. The advantages of this data collection method are that the respondents have freedom to answer the questionnaire any time they prefer, and the questionnaire can be completed within a short time.

**Sampling design and procedure**

Non-probability method is applied in this study. Among all sampling techniques of non-probability method, quota sampling technique is adopted. Quota sampling technique selects samples based on the specific proportion from each segment (Kabir, 2016). It ensures that the selection of sample is non-random but purposive to investigate...
those who looked helpful. The questionnaire used in study was developed and adapted from prior studies to suit the framework of this study (Uyar, 2019; Ifinedo, 2011; Premkumar and Bhattacherjee, 2008; Grandon and Pearson, 2004). The questionnaire contains two major sections, the first section collects the demographic information about the respondents, while the second section comprises questions regarding each factor and behavioral intention towards AIS adoption. All statements are measured by using the five-point Likert Scales.

The target population of this study is all SME firms from Klang Valley, Malaysia. According to the statistics given by department of statistics of Malaysia (Department of Statistic, 2017), WP Kuala Lumpur area and Selangor area show the aggregate establishment rate of 34.5 % out of total 907,065 establishments of SME throughout Malaysia. Hence, this study was conducted in the Klang Valley region which contains WP Kuala Lumpur and Selangor. The sample selected represents the target populations of this study, the questionnaires were addressed to the managers or owners of SMEs. They have been selected as the key candidates to answer this study because they are more likely to have some valid perceptions on AIS as they hold authorities on planning, controlling, and making decision for the firms. The data collected in this study was carried out between July 2020 and October 2020. 106 responses were collected from SMEs in Kang Valley.

**Data analysis method**

In this study, SPSS is used to analyse data. Descriptive analysis, Cronbach Alpha analysis, correlation analysis and multiple regression analysis are conducted through SPSS software to achieve the study result from the data collected.

**Results and Discussion**

**Profile of respondents**

*Table 1* demonstrates the results of a total of 106 respondents’ profile collected in this study. Over 106 respondents, 42.5% are male whereas the female respondents consist of more than 50% making up to about 57.5 %. Two different age groups of respondents make up to more than 30%, which is the 31-40 years old group and the 41-50 years old group at 31.13% and 37.74 % respectively. About more than half of the respondents have a degree or equivalent qualification, at the highest percentage of 67% out of all educational level. 34% firms have been established for 5 to10 years and only 7.5% of firms has been established for more than 20 years. Moreover, 33% of the firms have reached business turnover amount of RM 250,000 to RM 999,999 in 2019 which is the highest rate of response from respondents.

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>45</td>
<td>42.5</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>61</td>
<td>57.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>106</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less than 30</td>
<td>12</td>
<td>11.3</td>
</tr>
<tr>
<td></td>
<td>31-40</td>
<td>33</td>
<td>31.1</td>
</tr>
</tbody>
</table>

*Table 1. Profile of the respondents.*
By doing the descriptive test, a large amount of data can be simplified into a sensible manner. Thus, descriptive analysis is conducted to check the validity of the data input and summarize the responses based on the given category in the questionnaire. Table 2 displays the results of descriptive analysis for independent and dependent variables. There are 10 variables, and each variable includes a few statements. The findings show that majority of respondents at or above the level ‘agree’ with all the statements. For example, the highest mean (4.6) of the questions is perceived usefulness statement number one, which implies that most of the respondents agree that the usage of AIS would improve their business process.

Table 2. Results of descriptive test for variables.

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Percentage (%)</th>
<th></th>
<th></th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
</tr>
<tr>
<td>1</td>
<td>Compatibility</td>
<td></td>
<td>1.9</td>
<td>0.9</td>
<td>16</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Using AIS is compatible with our business culture and values.</td>
<td></td>
<td>0</td>
<td>3.8</td>
<td>18.9</td>
<td>48.1</td>
</tr>
<tr>
<td></td>
<td>Using AIS is compatible with preferred work practices.</td>
<td></td>
<td>1.9</td>
<td>3.8</td>
<td>23.6</td>
<td>48.1</td>
</tr>
<tr>
<td>2</td>
<td>Organizational readiness</td>
<td></td>
<td>0.9</td>
<td>5.7</td>
<td>20.8</td>
<td>47.2</td>
</tr>
<tr>
<td></td>
<td>We have enough technology resources to use AIS</td>
<td></td>
<td>1.9</td>
<td>5.7</td>
<td>24.5</td>
<td>44.3</td>
</tr>
<tr>
<td></td>
<td>Our employee has adequate knowledge to use AIS</td>
<td></td>
<td>1.9</td>
<td>5.7</td>
<td>24.5</td>
<td>44.3</td>
</tr>
<tr>
<td></td>
<td>Management is positive in the use of AIS in our business operations</td>
<td></td>
<td>1.9</td>
<td>4.7</td>
<td>17</td>
<td>50.9</td>
</tr>
</tbody>
</table>
Management encourage us to use AIS 3.8 1.9 21.7 46.2 26.4 3.9 0.945
Our accountants encourage us to use more advanced accounting system 1.5 9.7 9.4 46.2 36.8 4.1 0.925
We take into account the demands of our accountants in the selection and use of AIS 1.9 3.8 16 50 28.3 3.99 0.878
AIS usage would improve our business processes 1.9 1.9 14.2 52.8 29.2 4.6 0.826
AIS usage would help us to provide effective customer services 0 5.7 17 47.2 30.2 4.02 0.839
AIS usage would help us to work better our supplier 1.9 2.8 13.2 45.3 36.8 4.12 0.881
Using AIS is easy for our employees 0.9 3.8 18.9 49.1 27.4 3.98 0.945
Information produced by AIS is easy to understand 0.9 2.8 16 54.7 25.5 4.01 0.787
Time taken to master the use of AIS is short 0 13.2 18.9 34.9 33 3.88 1.02
The demands of government agencies and other institutions affect the AIS practices 1.9 6.6 20.8 48.1 22.6 3.98 0.839
Law and regulations are effective in selecting and applying AIS 1.9 7.5 29.2 41.5 19.8 3.70 0.938
Our competitors are also using AIS 0.9 2.8 24.5 50 21.7 3.89 0.881
Our business will be left behind if not using AIS. Our customers will switch to competitors if we do not use AIS 1.9 7.5 24.5 40.6 25.5 3.80 0.809
Our business vendor provides support services if difficulties in using AIS are encountered 2.8 12.3 19.8 47.2 17.9 3.65 1.005
AIS vendor provides training in using AIS 0.9 5.7 23.6 44.3 25.5 3.88 0.891
AIS vendor are concerned with potential problems in using AIS 1.9 2.8 19.8 52.8 22.6 3.92 0.841
AIS vendor are concerned with potential problems in using AIS 1.9 1.9 24.5 42.5 29.2 3.95 0.888
Our business can easily adapt AIS 1.9 4.7 20.8 52.8 19.8 3.84 0.863
Our business units operate in accordance with AIS 1.9 1.9 18.9 54.7 22.6 3.94 0.815
Innovations in AIS are quickly adapted to our business 0.9 7.5 17.9 55.7 17.9 3.82 0.848
AIS is widely used in business 2.8 2.8 17.9 50.9 25.5 3.93 0.897

**Cronbach’s Alpha analysis**

Table 3 shows the reliability of the statistic results for all the variables included in this study. Cronbach’s Alpha has been considered as a scale reliability measurement, which can be correlation efficient when the value is between 0~1(Babin et al, 2003). All variables have a Cronbach’s Alpha value of more than 0.8. In accordance to the rule of thumb, the result of Cronbach’s Alpha value between 0.8~0.9 is at a very good level. This indicates that all questions contained are reliable and acceptable, and can be used for future analysis.

**Table 3. Results of reliability test.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
<th>N of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral intention towards AIS adoption</td>
<td>.819</td>
<td>4</td>
</tr>
</tbody>
</table>

Cronbach’s Alpha analysis

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**Table 3. Results of reliability test.**
Correlation

Correlation analysis measures the relationship between dependent variables and independent variables. The importance of doing correlation analysis is to know whether the change on independent variables will affect the change on dependent variable. Pearson correlation evaluates the strength of a linear relationship for two or more variables. The value of range is between 1 to -1, the correlation of 1 gives a perfect positive correlation, -1 show a perfect negative correlation, and 0 means there is no correlation between variables. A high correlation means two or more variables are strongly related to each other, while a weak correlation indicates that the variables are hard to related (Franzese and Iuliano, 2019).

Table 4 illustrates the results of Pearson correlation analysis. Overall, the findings show that the dependent variable (behavioral intention towards AIS adoption) has significant positive correlation among independent variables (compatibility, organizational readiness, management support, accountants, perceived usefulness, perceived ease of use, government agencies and regulations, competitive pressure, vendor).

Table 4. Pearson correlation matrix.

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>C</th>
<th>OR</th>
<th>MS</th>
<th>A</th>
<th>PU</th>
<th>PEU</th>
<th>GAR</th>
<th>CP</th>
<th>V</th>
</tr>
</thead>
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<td>B</td>
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<td>.450**</td>
<td>.637**</td>
<td>.595**</td>
<td>.502**</td>
<td>.513**</td>
<td>.428**</td>
<td>.592**</td>
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<td>.432**</td>
<td>.473**</td>
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<td>.330**</td>
<td>.244**</td>
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<tr>
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<td>.590*</td>
<td>.432**</td>
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<td>.751**</td>
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<td>.540**</td>
<td>.592**</td>
<td>1</td>
<td>.694**</td>
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<td>.397**</td>
<td>.417**</td>
<td>.541**</td>
<td>.558**</td>
<td>.559**</td>
<td>.527**</td>
<td>.565**</td>
<td>.694**</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes: ** means correlation is significant at the 0.01 level (2-tailed) with frequency (N) are 106.

Multiple linear regression

Multiple linear regression analysis is a form of linear regression analysis which is frequently used in linear regression analysis. Multiple linear regression is used to describe the relationship between one dependent variable and two or more independent variables. Table 5 demonstrates the summary of regression model. R square is the coefficient of multiple determinations for multiple regressions, it varies between 0 and 1 and it indicates the percentage of variation explained by the line of multiple regression out of the total variation.

Table 5. MLR model summary.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R square</th>
<th>Adjusted R square</th>
<th>Std. Error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.735*</td>
<td>.541</td>
<td>.498</td>
<td>.48862</td>
</tr>
</tbody>
</table>
a. Predictors: (Constant), compatibility, organizational readiness, management support, accountants, perceived usefulness, perceived ease of use, government agencies and regulations, competitive pressure, vendor.

The value of R square is 0.541, which is understood as 54.1% of the total variation of dependent variable (i.e., behavioral intention towards AIS adoption) in this model, which can be explained by the independent variables (i.e., compatibility, organizational readiness, management support, accountants, perceived usefulness, perceived ease of use, government agencies and regulations, competitive pressure, and vendor). The reaming of 45% of R square is involves the other variables other than the independent variables included in this study.

ANOVA is an analysis of variance and it shows whether there is any potential statistical difference between the means of independent variables. According to the Table 6, it provides an F statistic of 12.554 and a P- value (< 0.001) which is below the significant value of 0.05, this indicates that the model is fit to use for further analysis since the independent variables have significantly predicted dependent variable (i.e., behavioral intention towards AIS adoption).

Table 6. MLR ANOVA.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>26.977</td>
<td>9</td>
<td>2.997</td>
<td>12.554</td>
<td>.001b</td>
</tr>
<tr>
<td>Residual</td>
<td>22.920</td>
<td>96</td>
<td>.239</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>49.897</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: behavioral intention towards AIS adoption.
b. Predictors: (Constant), compatibility, organizational readiness, management support, accountants, perceived usefulness, perceived ease of use, government agencies and regulations, competitive pressure, vendor.

The coefficient in Table 7 shows there are only two significant variables, which are management support and competitive pressure. The significant value p for each is at 0.021 (management support) and 0.041 (competitive pressure), which is less than 0.05. Nevertheless, the other independent variables have insignificant results, since p is greater than 0.05, these independent variables (compatibility, organizational readiness, accountants, perceived usefulness, government agencies and regulations, perceived ease of use and vendor) have no significant influence on adoption of AIS. Thus, the hypotheses are rejected for these independent variables, and the only hypothesis that are acceptable are management support and competitive pressure.

Table 7. MLR coefficients.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td></td>
<td>.524</td>
<td>.360</td>
<td>.105</td>
<td>1.456</td>
<td>.149</td>
</tr>
<tr>
<td>Compatibility</td>
<td>.100</td>
<td>.097</td>
<td>.105</td>
<td>1.031</td>
<td>.305</td>
</tr>
<tr>
<td>Organizational readiness</td>
<td>.050</td>
<td>.100</td>
<td>.048</td>
<td>.498</td>
<td>.620</td>
</tr>
<tr>
<td>Management support</td>
<td>.243</td>
<td>.104</td>
<td>.278</td>
<td>2.341</td>
<td>.021</td>
</tr>
<tr>
<td>Accountants</td>
<td>.086</td>
<td>.095</td>
<td>.101</td>
<td>.990</td>
<td>.371</td>
</tr>
</tbody>
</table>
Table 7. Coefficients for the regression model.

<table>
<thead>
<tr>
<th>Perceived usefulness</th>
<th>.069</th>
<th>.093</th>
<th>.071</th>
<th>.738</th>
<th>.462</th>
<th>.515</th>
<th>1.943</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived ease of use</td>
<td>.122</td>
<td>.090</td>
<td>.127</td>
<td>1.359</td>
<td>.177</td>
<td>.548</td>
<td>1.824</td>
</tr>
<tr>
<td>Government agencies and regulations</td>
<td>-.071</td>
<td>.082</td>
<td>-.085</td>
<td>-.871</td>
<td>.386</td>
<td>.502</td>
<td>1.990</td>
</tr>
<tr>
<td>Competitive pressure</td>
<td>.207</td>
<td>.100</td>
<td>.227</td>
<td>2.076</td>
<td>.041</td>
<td>.399</td>
<td>2.507</td>
</tr>
<tr>
<td>Vendor</td>
<td>.051</td>
<td>.100</td>
<td>.054</td>
<td>.508</td>
<td>.613</td>
<td>.418</td>
<td>2.393</td>
</tr>
</tbody>
</table>

Beta value is a measurement of how strong each predictor variable influences the dependent variable. Unstandardized coefficient represents how much dependent variable will change if independent variable changes by one unit while the other independent variables remain constant. Standardized coefficient measures one unit of change based on standard deviation. As shown in Table 7, management support strongly influences AIS adoption with a beta value at 0.243. Based on the regression model, the model equation is formed:

\[ Y_{ais} = 0.524 + 0.100(\text{Compatibility}) + 0.050(\text{Organizational readiness}) + 0.243(\text{Management support}) + 0.086(\text{Accountants}) + 0.069(\text{Perceived usefulness}) + 0.122(\text{Perceived ease of use}) - 0.071(\text{Government agencies and regulations}) + 0.207(\text{Competitive pressure}) + 0.051(\text{Vendors}) + \varepsilon \]

The purpose of this study is to investigate the factors affecting behavioral intention towards AIS adoption among SMEs. Based on the findings of this study, they show that management support has significant influence on the adoption of AIS (Table 8). The p-value displayed in the coefficient of multiple linear regression is 0.021 which lies below than the significant level of 0.05. Thus, it concludes that management support has a significant positive relationship with AIS adoption, and hence hypothesis 3 is accepted. The finding consists of the prior study by Komala (2012), Ahmad et al. (2013) and Yusof et al. (2008) as all studies have identical results which support that the management committees are significantly and positively affected by the adoption of AIS. This implies that if management committees possess positive perception on the adoption of AIS, they could influence the users’ perception positively and encourage them to use the system. The findings also emphasis on the key determinant of management committees or owners, and their roles as leaders and decision makers in a business. Therefore, AIS adoption among SMEs are highly dependent on the willingness of their management and owners.

Table 8. Summary of finding.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Pearson correlation</th>
<th>Multiple regression</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Compatibility has significant positive relation with AIS adoption.</td>
<td>( r = 0.503 ) ( p = 0.000 ) (&lt; 0.05 )</td>
<td>( P = 0.305 ) ( &gt; 0.05 )</td>
<td>Reject H1</td>
</tr>
<tr>
<td>H2: Organizational readiness has significant positive relation with AIS adoption</td>
<td>( r = 0.450 ) ( p = 0.000 ) (&lt; 0.05 )</td>
<td>( P = 0.620 ) ( &gt; 0.05 )</td>
<td>Reject H2</td>
</tr>
</tbody>
</table>
As presented in the tables of findings, the results suggest that competitive pressure have a significant positive relation towards AIS adoption. The analyzed outcome from multiple linear regressions show a p-value of 0.041, which is less than 0.05. It indicates a significant relation between competitive pressure and AIS adoption. Hence, the hypothesis 8 is accepted. The finding of this study is supported by Abera (2018), Imre (2017), Burinskiene and Pipirienė (2013) and Pontikakis et al. (2006) as their research pointed out that the external threat from competitors is generally the major factor that leads to SMEs making decisions to adopt AIS. Due to perceived threats from competitors, SMEs are facing great pressure. Thus, SMEs are finding a mean to enhance survival, growth and promoting their services to customers in order to stay competitive in the market. Enhancing the information system is a direct way to develop and improve the efficiency of business in dealing with their customers. Hence, competitive pressure significantly and positively affects SMEs’ decision behavior on AIS adoption.

Government has always been considering to improve the performance of SMEs. This study helps the government to understand factors that promote SMEs towards technology adoption. Based on the findings, management support and competitive pressure have shown a significant and positive relation with AIS adoption. The reason is that; SMEs are clear that the adoption of information system could enhance their competitiveness. Competitiveness keeps SMEs to continue improving their performance in domestic market and helps SMEs in their long-term development in the global market. Thus, government should encourage and support SMEs on innovation and technology adoption. This study also helps managers, accountants and vendors to facilitate the adoption of AIS. For example, when managers know that their significant and positive impact on AIS adoption, they should encourage their employees to adopt AIS.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Correlation Coefficient (r)</th>
<th>P-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3: Management support has significant positive relation with AIS adoption</td>
<td>0.637</td>
<td>0.021 (&lt;0.05)</td>
<td>Accept H3</td>
</tr>
<tr>
<td>H4: Accountants has significant positive relation with AIS adoption</td>
<td>0.595</td>
<td>0.371 (&gt;0.05)</td>
<td>Reject H4</td>
</tr>
<tr>
<td>H5: Perceived usefulness has significant positive relation with AIS adoption</td>
<td>0.502</td>
<td>0.462 (&gt;0.05)</td>
<td>Reject H5</td>
</tr>
<tr>
<td>H6: Perceived ease of use has significant positive relation with AIS adoption</td>
<td>0.513</td>
<td>0.462 (&gt;0.05)</td>
<td>Reject H6</td>
</tr>
<tr>
<td>H7: Government agencies and regulations has significant positive relation with AIS adoption</td>
<td>0.428</td>
<td>0.177 (&gt;0.05)</td>
<td>Reject H7</td>
</tr>
<tr>
<td>H8: Competitive pressure has significant positive relation with AIS adoption</td>
<td>0.592</td>
<td>0.041 (&lt;0.05)</td>
<td>Accept H8</td>
</tr>
<tr>
<td>H9: Vendors has significant positive relation with AIS adoption</td>
<td>0.540</td>
<td>0.613 (&gt;0.05)</td>
<td>Reject H9</td>
</tr>
</tbody>
</table>
Conclusion

To sum up, this study has analyzed nine variables from organizational factor, stakeholder factor, technological factor, and external factor to study behavioral intention of SMEs towards AIS adoption. However, only two are statistically significant which is management support and competitive pressure. Nevertheless, other variables (compatibility, organizational readiness, accountants, perceived usefulness, perceived ease of use, government agencies and regulation, and vendors) which are significant in prior studies have not shown any consistent result in this study. This study focuses on AIS to study the adoption of information technology among SMEs and expand knowledge by applying the TAM model, TOE model and stakeholder theory to identify the impact of various factors on AIS adoption. It is believed that this study makes several contributions to the literature adoption of IS and AIS, and provides some useful insight to the government and other individuals such as, vendors, accountants, and managers about the adoption of AIS among SMEs in Malaysia.

It is believed that future research on this topic may adopt different theoretical models to develop and investigate the behavioral intentions of SMEs such as, the unified theory of acceptance and use of technology (UTAUT) model, theory of planned behavior (TPM) model and task technology fit (TTF) model. SMEs from other states of Malaysia could be included in this study to investigate the adoption of AIS across the whole of Malaysia. Furthermore, study on individuals towards AIS adoption could be conducted on various group related to SMEs such as accountants, technology staffs, management committees and vendors that might bring out a more comprehensive outcome. The data only provide a snapshot of the timeline. Future research may increase the sample size and take a more longitudinal approach which could provide a better understanding of the research findings.

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Conflict of interest

There is no conflict of interest with any parties involved with this study.

REFERENCES


