

# Accounting Information Systems (AIS) in SMEs: Towards an Integrated Framework

Fahmi Ibrahim, Universiti Teknologi Brunei, Bandar Seri Begawan, Brunei Darussalam

Diyana Najwa Haji Ali, Universiti Teknologi Brunei, Bandar Seri Begawan, Brunei Darussalam

Nur Suaidah Awang Besar, Universiti Teknologi Brunei, Bandar Seri Begawan, Brunei Darussalam

## ABSTRACT

Small-medium enterprises (SMEs) have always been considered to be the backbone of Brunei's economy. As published by the OECD in 2006, SMEs constitute a high percentage of businesses, where they account for 98% of all active business enterprises, and contribute about 92% of the employment in the private sector, and at least 66% of the GDP within the non-oil sector of the economy. Since SMEs are considered to be significant for the economy, they are encouraged to improve their business performance in order to sustain their business development by enhancing their accounting information system. This article will focus on the current accounting practices in which Brunei SMEs have been implemented by MMA Cube Stores as a case study. As cube shop businesses have been growing all over the country, it is significant to carry out this research as it may apply to the other similar business in Brunei. Reasonable recommendations are included in this article for the augmentation of the accounting system among Brunei SMEs.

## KEYWORDS

Accounting Information Systems, Brunei, Integrated Framework, SMEs

## 1. INTRODUCTION

Small and medium-sized enterprises (SMEs) have played a key role in economic growth and equitable development in developing countries (OECD, 2006). In Brunei, SMEs account for 98 per cent of all active business enterprises and have contributed 58% of total employment and 22% of Gross Domestic Product (GDP) (Association of Southeast Asian Nations, 2011). Thus, small and medium enterprises (SMEs) are considered to be the one of main contributor to the economy of Brunei Darussalam. For almost a decade, His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam has been highlighting the importance of SMEs in his Titah as their contribution in providing secondary support and income to the country's economic growth is important as ever (Anwar, 2007). While many small-medium enterprises (SMEs) have encountered new obstacles (Chan & Qi, 2003; Yunis et al., 2013), there are several success factors that may contribute to the success and failure of SMEs. The

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critical of success factors (CSFs) for SMEs can be categorised into three main types; entrepreneurial, enterprise and business environment (Simpson et al., 2012; Rutherford et al., 2000; Gibb, 2000). In view of this chapter, accounting system practices and information systems are identified in the literature as contributing success factors under the proxy of Enterprise-Strategic Planning and Business Environment-Technological. Accounting system is the form of strategic planning of an organisation with technological of information systems that must go well to ensure the success. However, the article will focus on one of the factors which is the accounting system practices of small and medium enterprises (SMEs) in Brunei using one company as a case study.

Accounting Information Systems (AIS) is a vital resource for today's SMEs as it has the ability to facilitate towards an effective decision making, planning and controlling activities of an organisation. SMEs are highly required to manage their accounting and finances efficiently in order to maintain and improve their business since one of the aims of running a business is "profitability". Finance in general (but cash in particular) is critical issue for growing businesses (Carpenter & Peterson, 2002; Sexton et al., 1997). Hence, adequate and high-quality accounting information systems is crucial to achieve this goal. This is because the lack of access to information (Islam, Abdullah & Salleh, 2001) and proper accounting records may contribute to the failure of SMEs. Moreover, previous research discovered that poor information quality may lead to negative effects on the decision making (Huang, Lee & Wang, 1999; Clikeman, 1999).

It has been emphasised that entrepreneurs should be aware the importance of book keeping and accounting to keep their finances in-checked because maintaining efficient accounting records can help business growth. Obviously, some new entrepreneurs do not keep records of how much they spend and they are unsure if their business is making profits or losses (Zaili, 2015). In addition, the Brunei government has provided financial aids for the local SMEs to enhance their capabilities in providing good services and products through programs such as the 8<sup>th</sup> National Development Plan. This program is for the local entrepreneurs to participate further in the economic diversification of the country (Anwar, 2007). In view of this, Pehin Orang Kaya Laila Setia Dato Seri Setia Haji Awang Abdul Rahman bin Haji Ibrahim, the former Minister of Finance advised SME entrepreneurs to have a "high level of personal integrity and adopt a strong capacity towards business management, particularly on financial discipline. This is because a true understanding and strict demonstration of financial discipline would always underpin a successful business" (Anwar, 2007). Certainly, it shows that SMEs entrepreneurs should be aware of the importance of efficient business management and financial where good accounting record practices are essential.

For instance, an online accounting system called "Ikhlas" has been introduced to SMEs for entrepreneurs to use. It shows the significant of Information Technology (IT) or Information System (IS) should not be neglected anymore by the SMEs as their implementation can be seen in various forms of business practices. Nevertheless, there is criticism that IT has become common in SMEs which is no longer seen as an advantage because almost every organisation is using it (Chen & Hamdan, 2014).

## **2. WHY ACCOUNTING INFORMATION SYSTEMS (AIS) IS SIGNIFICANT?**

According to Gilantier and Underdown (1981), accounting is moving away from its traditional procedure base, encompassing record keeping and related work such as the preparation of budget and final accounts, towards the adoption of a role, which emphasizes its social importance. On the other hand, Information Technology (IT) and Information Systems (IS) are not new. They have always existed in organisations (Galliers et al, 1999) providing for the capture, storage, processing and transmission of information for communication, enhanced decision-making and for competitive gain or to be used as a competitive weapon. Basically, technology has dramatically changed the accounting profession (Fowzia & Nasrin, 2011). One response to this change is the development of accounting programs that emphasise AIS (Strong et al, 2006).

Nevertheless, AIS is defined as a computer-based system that processes financial information and supports decision tasks in the context of coordination and control of organizational activities (Nicolaou, 2000). The concept of AIS is quite well established and numerous commercial packages as well as tailor-made systems have been developed. 'Off the shelf accounting software is quick solution for most companies, reasonable and cost effective. To name a few: *FreshBooks*, *Sage 50cloud*, *NetSuite ERP*, *FreeAgent*, *Xero*, *QuickBooks Enterprise and FinancialForce Accounting*, are the top best accounting systems for business ([www.financesonline.com](http://www.financesonline.com)). However, user companies have to accept the fact that 'off the shelf' software can only meet 65%-85% user requirement (Yau & Ayeung, 2000). In comparison, tailor made software may increase the functionalities to meet specific user requirements. However, the business world is best by accounting systems that have varying levels of efficiency and excessive costs for such information (Yau & Ayeung, 2000).

Marriot and Marriot (2000) also state that financial awareness among managers of SMEs varies considerably and that the use of computers for the preparation of management accounting information should be at its full potential. Salehi et al. (2010) also confirmed in their study that sophisticated AIS improve accounting performance. According to McBride (2000), computerised packages can quickly generate all types of reports needed by management for instance budget analysis and variance analysis. Data processing and analysis are faster and more accurate which meets the managers need for accurate and timely information for decision making. However, researchers have found out that many organisation are struggling in exploiting the full functionality of their IS (Newell & Galliers, 2010). It is also clear that IS, if poorly managed, can be costly or even destroy organisations by preventing them carrying out their prime functions and processes. It is evident that benefits from information system use do arise automatically; they have to be actively managed (Grant et al, 2010).

Primarily, an understanding of the fundamental characteristics of SMEs and how these may differ from larger organisations is required as starting point before focusing on IS/Information Management (IM) in particular (Grant et al, 2010). Typically, SMEs have a relatively flat organisational structure (Levy & Powell, 2005) which is centralised as the owner(s) and manager(s) (who may be the same individual(s) may carry out multiple roles. The owner/ manager taking multiple roles in the daily running of an SME may enable it to be more dynamic (Levy & Powell, 2005) and to outperform large organisations in terms of responsiveness to customer needs, flexibility, the ability to identify and exploit opportunities and to adopt new technologies (Jeal & Wroe, 1999). Besides that, SMEs lacks on internal expertise IS/IT as well as having a resource poverty, thus, SMEs are advised to acquire an external expertise and skills in order to lessen their internal gaps and limitations in planning, implementing and managing their IS/IT resources (Caldeira & Ward, 2003; Peppard & Ward, 2004; Duncan et al., 2010, pp 173).

Adoption and development of information systems (IS) in SMEs are mainly driven by improvement in efficiencies as well as cost reduction (Levy & Powell, 2005; Harindranath et al., 2008). Yet, the adoption may be intervened by the existence of inhibitors which encompass the cost, management, security and technological factors (Levy & Powell, 2005). In the context of Brunei, it was demonstrated that there is less adoption of AIS among Brunei SMEs based on the study "An Exploratory Study of Information Technology Adoption by SMEs in Brunei Darussalam" by Chen and Hamdan (2014). The highlight was a four-factor model named as "TIME Model" to illustrate the IT usage among SMEs in Brunei as shown in Figure 1.

TIME is T - training, I - infrastructure, M – money and E- employee. From these factors, there are inter-related to each other. Money affects the utilisation of IT. This is due to the budget of purchasing the system, training the staff and having the employee to use it. Infrastructure purchase or availability will depend on the money that is available for it. Training will depend on the money available to purchase the system, employees available for to utilise the system and the training of the employees. Employees are related to the payment they get, and this might be affected by the moving to other business due to higher pay. The TIME model echoed by the analysis suggested that SMEs in

Figure 1. TIME Model Source: Source: Adapted from Chen and Hamdan (2014) "An Exploratory Study of Information Technology Adoption by SMEs in Brunei Darussalam"



Brunei required a comprehensive package-intergrated approach to encounter many difficulties they encounter (Islam, Karim and Salleh, 2001).

A significant investment is also essential in the use of information systems and technology in order to assist the business in determining the success of virtually every of its business operation (Benson & Tribe, 2008). Thus, the implementation of AIS can be a very costly process, which requires significant effort, time and money at every stage of the system's life cycle. Although the IS benefits are relatively a long way to go, the substantial benefits should not be underestimated as it has been revealed that in overall, "IT was regarded as an enabler of business growth" (Duncan et al., 2010). Several studies have shown that the fit between accounting and contextual factors, or between IS/ IT and contextual factors have significant impact on performance (Bharadwaj et. al, 1999, Melinda & Stephen, 2001, Holden & El-Bannany, 2004, Ismail & King, 2005).

Therefore, it is necessary for all organisations to have objectives for their actions. For IS, these objectives will derive from the business strategy and from the information systems strategy. IS strategy defines the organisation's requirement of 'demand' for information and systems to support the overall strategy of the business (Grant et al, 2010). This was also supported by Levy and Powell's whereby the authors claimed that the ISS framework or simply called as information systems strategy is said to be specifically suited for SMEs in aligning the use of IS/IT with the business strategy as well as leveraging the IS/IT benefits (Earl, 1989; Walsham, 1993; Levy & Powell, 2005, pp 113). Thus, without the objectives it is impossible to say whether any system is worth investing in. This is because, organisations are often disappointed by the actual benefits they realise, especially when compared to those anticipated (Grant et al, 2010). Hence, an IT application should be driven by strategy.

Moreover, according to Ward and Peppard (2003), a success implementation on IS can also be achieved by aligning the IS demand to the business strategy and, at the same time, searching for opportunities for IS/IT to improve the overall competitiveness of the business. Ward and Peppard (2003) and Bannister and Remenyi (2005) argue that alignment is about achieving a purposeful connection between strategy, organisation, processes, technology and people. Research by Wagner and Weitzel (2006) concludes that strategic IT business alignment and operational alignment are both positive influencers of competitive advantage.

Furthermore, a continuous and comprehensive set of effective investment appraisal techniques or evaluation processes are vital to evaluate and manage the cost-benefit of the operated IS along its life cycle phases. This approach which also refers to as Benefits Realization Approach (Thorp, 1998) is especially importance for the SMEs, as they are experiencing a limited resource base or so called 'resource poverty' (Levy & Powell, 2005). The essentiality of cost-benefit management is also evident by Love and Irani (2004) whereby evaluation process adopted by construction SMEs is used for both control and learning. The authors also stressed that it is an integral for SMEs to incorporate the appraisal process as part of their business strategy in order to leverage the IT benefits.

However, Symons and Walsham (1998) argued that IS/IT evaluation is difficult because of the multi-dimensionality of cause and effect and multiple, often divergent, evaluator perspectives. This was because the associated benefits though have many perspectives (Grant et al, 2010). Hence, the benefits of AIS can also be evaluated by its impacts on improvement of decision-making process, quality of accounting information, performance evaluation, internal controls and facilitating company's transactions (Bolon, 1998). Besides that, information systems success also needs to be considered in terms of the perspectives of stakeholders such as users, developers, sponsors and senior management all of whom will have different views of what constitutes success and may view this success from different standpoint – technical, use, effects and results (Grant et al, 2010). Basically, the benefits of having IS can only be established through the use by the business organisation (Tiernan & Peppard, 2004).

Avison (2010) also stressed that information systems development (ISD) and its maintenance are the key elements in supporting the business and organisational strategy using IS/IT. Moreover, the IS/IT investment contributes to the organisation's subsequent long-term productivity and profitability only if there is an effective project management in systems implementations and proper training and skills enhancement for the systems users (Wynn and Maldonado, 2007). Thus, the roles and competencies of IS/IT staff as well as top management perspectives and attitudes (Caldeira & Ward, 2003) are very critical towards maintaining the capabilities of the IS for achieving the organisational goals. Nevertheless, Wagner and Newell (2007) has recognised the 'post-implementation' period as the essential factor in IS development as it is truly provides a crucial support for practice-based learning and training for users in understanding 'their jobs better' with the use of the actual system (Newell & Galliers, 2010).

However, there is a very limited research in respect to the implementation of accounting system which may be in manual or automated system in the country. Hence, this study seeks to examine the practices of accounting system in the Brunei SMEs. Also, the paper will evaluate the current practices of their accounting system on its net benefits or contribution to the organisation.

### **3. RESEARCH METHODOLOGY**

The research methodology and design were based upon an inductive approach of a single case study with aim for theory development (see Figure 2). This approach was used as it is suggested by Ryan, Scapens and Theobald, (2002), that a descriptive case study can assist in describing an accounting systems, techniques and procedure used in practice. This study researched only one selected cube shop with an objective to provide a description of accounting system practice and its challenges. To gain in-depth information in respect to the study area, the account manager/owner of the enterprise was selected as the respondent in this study for an interview. Given that the company is small which is less than five employees with the owner/manager plays in different roles in managing the business, one respondent was considered adequate to have high degree of data validity.

Semi-structured interview was used as it is more open and flexible approach which could help in generating more additional information as well as gaining a thorough opinions or feedback from the interviewee. As the aim was to discover new facts, the interview style has to be structured in a flexible manner and the way in which the questions are placed could be changed or adapted to the course of the conversation. In addition, this enabled the interviewer to change the wording of the question or ask in another way if something was not clear. Likewise, additional questions, which had not been prepared prior to the interview was also been asked to provide a reasonable aid and discussion for this paper during the interview. Thus, this method offered an insight on the extent to which the current system or processes are being used, challenges faced and thoughts about optimising the current system. A qualitative research approach was used in this case study to allow interpreting and explaining phenomena with words. In a qualitative interview like this interview, the most challenging part is the interpretation of the information gathered from the interviewee. There

are no specific instructions how the interpretations should be made, but it should be noticed that the answers are just personal opinions of the interviewee.

#### **4. BACKGROUND OF THE COMPANY 'MMA CUBE STORE'**

MMA Cube Store is a family-owned sole proprietorship type of business established on 3rd January 2015. There are currently three full time employees which include an account manager, two sales persons (one full time-one part time). The main business activities are rental service for their cube, trading activities of the vendors' items and inventory management service for the vendors'. The aim of the business is to maximise profit, develop more branches and to encourage the spirit of entrepreneurship among Bruneians while to inspire youths to starting up a new business with the opportunities the market has offered.

#### **5. FINDINGS AND DISCUSSIONS**

The findings section discusses skills and abilities of the owner-entrepreneur, an analysis the awareness on the importance of accounting information systems, its current accounting system practices and the perception of the respondents with regards to the improvement of the enterprise's current accounting system.

##### **5.1. Skills and Capabilities**

One of the distinguished characteristics is the of SMEs is the skills and abilities of the owner-entrepreneur. Given that 'entrepreneurial factors' is significant to the success of the company, it may affect the business growth and even may lead to business failure should the entrepreneur lacks of knowledge and unfamiliar with accounting processes. The owner-entrepreneur has more than a year working experience. It is claimed that the skills and knowledge of accounting operationalisation largely from previous experiences. All accounting documents are kept for records. However, it was revealed that standard recordkeeping in accounting books such as ledger was not implemented. Only basic simple recording system using Microsoft Excel were used monthly for rental reporting purpose.

Since the business provides trading activities for vendors, recordkeeping on sales transaction for monthly sales report is required skills. Nevertheless, the respondent expressed the concern of lack of advanced accounting knowledge working experience to perform the necessary task. It was mentioned qualification along with internship experience can only provide the basic ability to perform enterprise's accounting practices. This demonstrates the need of AIS either off the shelf software or tailor-made that can facilitate the owner-entrepreneur to evaluate company's performance with effective accounting systems. Refer to literature, accounting should be moving away from its traditional procedure base, encompassing record keeping and related work such as the preparation of budget and final accounts (Gilantier and Underdown, 1981).

##### **5.2. Awareness on the Need of Accounting Information Systems (AIS)**

Basically, respondents are aware that AIS is considered to be important for the business. According to literature the purpose of AIS is to collect, store, and process financial and accounting data and produce informational reports that managers or other interested parties can use to make business decisions. The findings demonstrate for instance, that sales data are important to the enterprise because of two reasons which include for trading, i) there is a need to create a monthly sales report for every vendor. Also, ii) the use of sales data on rental service is beneficial to create a monthly rental income report for their business.

*We need to create a sales report for every vendor which we provide them in monthly. And we also need our rental services' sales information to create a monthly report for our rental service, so that we know our sales revenue every month. (Interviewee)*

Moreover, the interviewee also clarifies that the enterprise tracks their expenses through their cash outflow where they keep all the transaction documents on their Microsoft Excel "Expense" file.

*We still can track our expenses from our cash outflow because the transaction is not much (too many). Besides we also keep all the transaction documents on our 'Expenses' file like stationeries, wages and our ordered rental and sales receipts book for our reference. (Interviewee)*

Based on the responses above, it shows computerised packages can quickly generate all types of reports needed by management for instance budget analysis and variance analysis (McBride, 2000). Data processing and analysis are faster and more accurate and timely information for decision making.

In addition, the interviewee responded to the awareness to comply with the Government Regulation on Recordkeeping (2015). However, the respondent claimed that no financial planning, budgeting activities and analysis on cost and revenue in place either. It could be problematic because, in general, the analysis of cost and revenue is considered to be vital in sustaining company's business growth. This was verified from the literature that financial awareness among managers of SMEs varies considerably and the use of computers for the preparation of management accounting information should be at its full potential (Marriot and Marriot, 2000). Although AIS can be a 'manual system', the need of AIS-computer-based is inevitable. It is also confirmed in their study that sophisticated AIS improve accounting performance (Salehi et al., 2010).

In view of the need of AIS, it is important to note that there is criticism on the benefits of existing 'basic' accounting systems which claimed to be 'neutral' without added value as mentioned by the respondent:

*I rate this system as 'neutral' in terms of the information's quality which is the sales report. Microsoft Excel can still generate an up-to-date output reports. The inaccuracy and irrelevancy are mainly based on human error in recording the inputs or calculation. (Interviewee)*

*I rate this system as 'neutral' in terms of giving benefits in reducing operating costs, improving the quality of information, improving decision making, and improving our business sale profits as I unsure it can produce financial reports which provide an overview of business performance.*

From the responses, it can imply in broader picture that the success of IS including for accounting depends on the perspectives of stakeholders such users of whom will have different views of what constitutes success and may view this success from different standpoint – technical, use, effects and results (Grant et al, 2010). Further, the response implied that organisations are often disappointed by the actual benefits they realise, especially when compared to those anticipated (Grant et al, 2010).

### **5.3. MMA's Current Accounting System**

In view of the need of AIS, the current accounting system were analysed as presented in following section.

#### **1. Filing System**

The interviewee is asked to describe their filing system. For instance, on how they keep and filing their accounting documents. Based on the response, most of their business transactions and

supporting documents are kept and managed manually in files and cabinet and in MS Excel. The interviewee also shares all their relevant files which include: rental, vendors, expenses, payroll and inventory. Besides that, some documents in which they maintain are; payroll, rental, vendors, stock-restock form and sales report.

*Rental file (for rental receipts and contract), merchants or vendors file (for sales report), expenses file (for stationery, receipt book and rental receipt book), and payroll file (for payroll slip) and inventory file (for stock-restock form or vendors' inventories information which is a part of our inventory management activities)... Some documents like payroll, rental, vendors, stock-restock form and sales report are also produced and stored in the laptop via Microsoft Excel document for our soft copy reference. (Interviewee)*

This implies SMEs are highly required to manage their accounting and finances efficiently although through 'manually system' in order to maintain and improve their business since finance in general are critical issues for growing businesses (Carpenter and Peterson, 2002; Sexton et al., 1997). The peril is because the lack of proper accounting records may contribute to the failure of SMEs. Moreover, previous research discovered that poor information quality may lead to negative effects on the decision making (Huang, Lee & Wang, 1999; and Clikeman, 1999).

## 2. Recordkeeping Systems

In businesses particularly in SMEs, accounting may be either managed internally or externally (outsourcing) that linked to 'resource poverty' claimed by Caldeira and Ward, (2003); Peppard and Ward, (2004); Duncan et al.,(2010, pp 173) in the literature. For MMA's, their accounting is managed internally and most of their current practices in managing accounting information are done manually. For instance Microsoft Excel are utilised for record keeping purpose for simple calculation for their business rental income and vendor's sales revenue. The respondent claimed Excel is easy to use for basic calculation and it is readily available even though it is not sophisticated accounting software.

*We just do simple record in Microsoft Excel to calculate the total of our monthly rental income... As we also provide trading activities for our vendors, we also do recordkeeping for our vendors... I will retrieve on later date and input them in spreadsheet which is Microsoft Excel, for preparing and generating the enterprise and vendor's monthly sales reports. This help use to provide each vendors' with their sales revenue in every month. (Interviewee)*

*I am just feel assure that by improving to an advanced computerised system which linked to the Points of Sales (POS) machine, this may improve the productivity of our service in terms of eliminating the process of recording the details by hand-typing. Further, this will also improve the quality of our service in generating fastest response and more accurate information. (Interviewee)*

It shows clearly with basic IT package respondent still not able to exploit the full functionality of their IS (Newell & Galliers, 2010). These findings suggested benefits from information system use do arise automatically; they have to be actively managed (Grant et al., 2010). With the intention to enhance their accounting practices, the respondent has planned to get support from the external expertise, such as the external sources i.e. business solution company. It is believed should they adopt computerised accounting system, it would improve the productivity and quality of their service, responsive with accurate information and data.

### 3. Reporting System

In terms of reporting system, a simple monthly rental income report for the rental service and monthly sales report are produced for their vendors by using Microsoft Excel which are vital for their operational purposes.

*I will retrieve on later date and input them in spreadsheet which is Microsoft Excel, for preparing and generating the enterprise and vendor's monthly sales reports... We prepare and generate a simple monthly rental income report for our rental service and monthly sales report for the vendors. (Interviewee)*

The respondent described further the 'operation' of reporting system of the business activities which is largely based on manual systems.

*For trading, we just use a manual way which is using a calculator to compute the total costs, and record them in a 'sales receipt' book. The first receipt will be given to the customer, while the second receipt will be put into a rack called as 'receipt locker'. The purpose of this rack (which has more than 200 slots) is to help us in organising the right sale receipts for the right cube code (which represent a vendor). Organising this sales receipts on their right slots are time consuming especially during peak hours and pay days. (Interviewee)*

The response demonstrates basic 'AIS' has been adopted by the company and shows a significant investment is also needed in the use of information systems and technology in order to assist the business in determining the success of virtually every of its business operation as suggested by Benson and Tribe (2008). Perhaps for SMEs the implementation of AIS can be a very costly process, which requires significant effort, time and money at every stage of the system's life cycle. Nevertheless, MMA should take an approach that IT/IS are regarded as an enabler of business growth (Duncan et al., 2010).

#### 5.4. Challenges in Current Accounting System

Most of the challenges of MMA current accounting system is more towards operational issues that is aligned to their business strategy. For example, the respondent stated one of the main problems is related to duplication of data, inaccuracy of data as well as the difficulty in accessing the data; specifically in retrieving them and which is ineffective and time consuming. While it is time consuming and ineffective it is revealed that their reporting system with using Microsoft S Excel has inability to produce the actual financial performance of their business instead estimated profits for each month.

*The reason for using the Microsoft Excel which is to generate the monthly sales report is basically to improve our sales quality where, vendors would know their sales performance in each month this can also help us to track our own business performance. (Interviewee)*

*The use of Microsoft Excel in generating the sales report can also help us to manage the inventory. (Interviewee)*

In Brunei, different types of accounting software are still quite unknown and the most used accounting software among the businesses in Brunei is UBS (Chen & Hamdan, 2014). As for SMEs, it is clear that many are still dependent on Microsoft Excel and use it as their "computerised accounting system". However, Microsoft Excel is not adequate accounting tool because it is still considered as a

manual system where the layouts of accounting processes are manually typed on the computer which is obviously very time-consuming.

The response above shows the challenge of accounting practice can be improved by aligning with the business strategy to increase sales of business performance and control cost in managing inventory with adoption AIS. Moreover, according to Ward and Peppard (2003), a success implementation on IS can also be achieved by aligning the IS demand to the business strategy and, at the same time, searching for opportunities for IS/IT to improve the overall competitiveness of the business. Ward and Peppard (2003) and Bannister and Remenyi (2005) argue that alignment is about achieving a purposeful connection between strategy, organisation, processes, technology and people. Research by Wagner and Weitzel (2006) concludes that strategic IT business alignment and operational alignment are both positive influencers of competitive advantage.

In view of alignment towards 'people', the challenge is to overcome to the lack of expertise in managing or analysing accounting data and information. This was highlighted in literature the roles and competencies of IS/IT staff as well as top management perspectives and attitudes (Caldeira & Ward, 2003) are very critical towards maintaining the capabilities of the IS for achieving the organisational goals. However, the respondent has the intention of undertaking more training i.e short training session of special course, a seminar and e-learning on accounting practices to have better knowledge and understanding of the accounting system and to be able to analyse their cost and revenues.

*Yes, I am really keen to gain more knowledge and develop my expertise in this area to help manage the business more effectively. (Interviewee)*

*I would like to attend any short training session, special course or classroom training or e-learning and seminar or workshop specifically on this management and accounting areas. (Interviewee)*

The responses are related to literature states that IS/IT investment contributes to the organisation's subsequent long-term productivity and profitability only if there is an effective project management in systems implementations and proper training and skills enhancement for the systems users (Wynn and Maldonado, 2007). While skills and knowledge of the people should be taken into consideration, the findings have demonstrated the limitation of budget become one of main obstacles to implement AIS.

*I have a desire to adopt advance system, for example using a bar code which connects to the accounting system. However, the price is very expensive, maybe around \$10,000 plus, which we absolutely could not afford it at the moment. (Interviewee)*

*The main issue is due to inability to select an appropriate software which fits for small business as we also have inadequate budget. (Interviewee)*

In summary, the challenges of the of the current MMA's accounting system are strategy alignment with operational issue, people factor and limitation of budget for AIS investment.

## **6. DEVELOPMENT AND DESCRIPTION OF PROPOSED SP2i FRAMEWORK**

This section draws on the main findings of the research to develop a SP2i Conceptual Framework in order to provide insightful framework understanding of AIS function in facilitating operational accounting process, its related factors and the added value. The framework (S –Strategy; P –People; i - (1) Investment; i - (2) Infrastructure) provides a sense of understanding the AIS function and its added value by showing the interrelationship mechanisms between strategy, AIS implementation

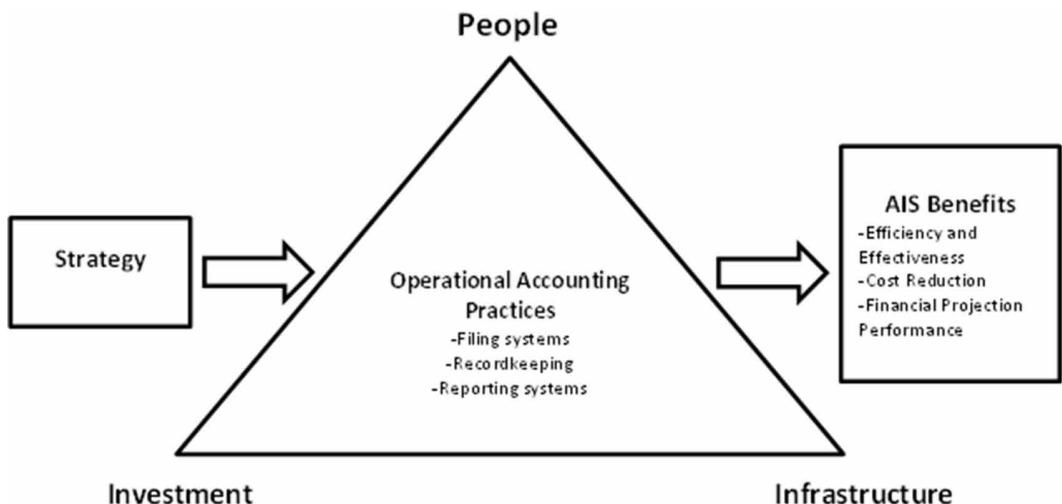
factors; people, investment and infrastructure. The illustration of the framework shown in Figure 2 is only conceptual based on interpretations from the findings of the interviews.

As a starting point, the organisation should have a strategy to achieve the company’s objective through adoption of AIS. The strategy should be made visible to all employees so as to make operational of accounting practices directly part of business strategy. It was discovered from the findings that lacked of alignment of basic accounting systems towards strategic endeavour to achieve business objectives. This is because it is the alignment of both business and IS strategy can act as a driver to improve the SMEs efficiency or effectiveness in maintaining its accounting and finances.

The strategy will then link up to the function of AIS, which is translated into specific factors, people, investment and infrastructure where the core of accounting practices-operations in the heart of the triangle-diagram. For People -SMEs owners and managers are encouraged to be able to strengthen their management skills and accounting skills to support the implementation of AIS. Basically, they must be aware of the importance of accounting information and data and as this is crucial part of running a business. If a company were to develop the AIS infrastructure by implementing specialised accounting software for its accounting activities, the owner or manager should be able to evaluate the condition of their enterprise, whether they have adequate investment and resources for the AIS adoption or implementation. Full understanding these factors is significant because it assists the business owner or manager for an effective decision making so that the implementation of information system may become beneficial to the business. Thus, SMEs should have a solid objective on why AIS should be implemented.

It was highlighted from findings that the operationalisation of accounting; filing system, recordkeeping system and reporting system practices are related to ‘foundation-ecosystem’ factors; people, investment and infrastructure. This process requires the capability of AIS to convert it into added-value which is beneficial to organisation. From the findings, the framework consolidates the added value than can be categorised into; efficiency and effectiveness of accounting practices, cost reduction, projection of sales and financial performance. The illustration of Figure 2 is meaningful as it integrates the interrelated factors with a balanced view of added value single framework. This framework has contributed to extend the existing knowledge to improve Brunei SME’s including technological and change and access with integrated approach proposed by Islam, Abdullah & Salleh, 2001).

Figure 2. SP2i framework



## **7. CONCLUSION**

In conclusion, it can be claimed that AIS plays a significant function in adding value to MMA company. This study is able to contribute through the development of a conceptual framework for the understanding of the function of AIS through its practical manifestations and nature of its implications. The framework developed in this study has the potential to provide a guideline for practitioners not only to succeed in implementing AIS but to secure the added value which was criticised as multidimensional and indirect. Accordingly, the proposed framework is intended to be served as a useful guideline for drawing attention to the theoretical underpinnings of the concept of AIS and the characteristics of the factors, understanding the interplay between these and strategy and the nature of added value. This study is not free from limitations. Since the paper is based on a single case study research setting in the context of the Brunei SME, the findings have potential limitations in terms of generalisability. Nevertheless, as the concept of 'theoretical generalisation' was applied, there was no intention to give a false impression of the results. As with other qualitative research approaches, the emphasis of this paper is on the perceptions of the participant which is always open to multiple interpretations.

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*Fahmi Ibrahim is an Assistant Professor of Strategic Management in School of Business, Universiti Teknologi Brunei. His research focus is on strategic management, knowledge management, intellectual capital management, and MIS.*

*Diyana Najwa obtained her bachelor's degree in Business Information System and master's degree in Management and Technology at Universiti Teknologi Brunei. She is currently a PhD candidate at Universiti Teknologi Brunei.*

*Nur Suaidah has graduated from Universiti Teknologi Brunei for her undergraduate and master's degree. She is currently joining an apprenticeship programme and has served as an IT and media officer at Halal Food Control Division, Ministry of Religious Affairs.*