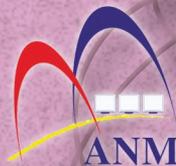


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Accounting Practice In North Borneo: Changes Within 1881-1941¹

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ABSTRACT

The dynamic of accounting practice as part of social system is acknowledged. It interacts with environment to respond to environmental pressure and the ever changing needs of enterprise. This has extended the understanding of accounting from a mere technical and neutral practice to a socially and politically related activity. As such efforts have been devoted to understand how accounting changed and developed over time in public and private sector. Historical investigation is getting popular in an effort whereby accounting development is narrated through societal development concerning social, economical and political phenomenon. This is particularly important in the context of public sector whereby historical aspects of accounting practice describe previous practice, explain the existing practice, and prescribe the future practice of accounting. The mobilisation of accounting practice in social, economical and political phenomena describes and provides informative and authoritative

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evidence on the relationship of accounting to its environment and consequently on how accounting change occurred. This could lead to a prescription, practically, on how to manage and harness accounting change. This paper presents evidence of such a claim through a historical investigation on accounting change phenomena during the colonial era in North Borneo. Such a comprehensive investigation that covers the period of 61 years (1881-1941) provides a thick description to understand the previous practice and how it influences the accounting in practice currently. Extensive review on archival documents in the Archive Department of Sabah illuminates evidence of accounting change process during the period under study.

Keywords: Accounting changes, history, North Borneo, imperialism, colonialism, British North Borneo Chartered Company.

INTRODUCTION

The interests to understand accounting practice and accounting in practice have lately motivated researchers to study changes in accounting. It is to describe accounting change process and to prescribe how the change process should be managed so that issues facing accounting practice, such as accounting lag, can be handled by both scholars and practitioners. Since then, accounting change becomes one of the most researched field study. Results from those researches demonstrate the dynamism of accounting practice, explaining the developmental phases and their characteristics, as well as illuminating the social nature of the practice.

Historical investigation is getting popular in this context. Through historical investigation accounting change process can be explained in a more authoritative manner by virtue of historical evidence, detail analysis on processual² (Dawson, 1994) track and thoroughness of its contextual relationship. It is in line with an increasingly accepted view amongst accounting scholars that investigation on accounting phenomena must not be limited within its technical rationality, or within aggregated financial results and a narrow focus on the structure and contents of the annual report (Gomes et al. 2011), rather, to capture as well its interrelatedness with social, cultural, and economic context (Hopwood, 1987; Bryer, 1993b). This, as they claimed, offer better description of the accounting change process. Historical approach enables the investigation process to encompass the political and ideological element of accounting practice along the investigation process.

One of the arenas in which accounting historical researches have been grounded is colonial process of imperialism. This colonial process makes accounting changes traceable via its involvement in collectivistic social arrangements within a colonial regime. Indeed, accounting plays a significant role in the process of capital exchange and business transactions during the era of colonial. This provides an informative context to investigate accounting practice and simultaneously the change process that occurred. It provides evidence on the interaction between accounting and its

² *Processual track is a term made popular by Dawson (1994) who argues the importance of understanding accounting historically and contextually, by tracking, explaining and comparing the attributes of the practice at a particular time as compared to other point of time.*

changes on one hand with their contextual setting on the other. Investigation on such an interaction enables understanding on accounting change process and information about its other related aspects, such as forms, attributes and motivation of the change process.

This paper presents a case of accounting change process during a colonial era in the North Borneo (now Sabah, one of the states in Malaysia). North Borneo was made a colony by the British North Borneo British Chartered Company (BNBCC) in 1881 and this research covers the period of 1881-1941 when a British's Chartered Company ruled the area. Further analysis divides the period into three; Period I (1881-1890), Period II (1890-1914), and Period III (1914-1941).

The subdivision of the period was based on the findings that demonstrated significant differences in accounting practise between the periods which were attributable to the stages of economic development in the area as well as characterized by major economic trends such as recession and political turmoil (WWI and WWII). The case illustrates that the form and focus of accounting practice had changed from one period to another due to pressure and environmental changes experienced by the enterprises. Therefore the case illustrates the process of how accounting technology developed, changed and mobilized to supplement the needs of the dynamic environment, and the role played by the business managers as the agent and medium of accounting technology transfer as claimed by a number of accounting historians.

In section 2; the following section, the relationship and position of accounting within imperialism and colonialism is

presented. Historical background of the North Borneo and colonial occupation is discussed in section 3. Section 4 explains the methodological option of the research. Finally, section 5 and 6 present the findings and discussion section of this paper respectively, after which the concluding statement is given.

IMPERIALISM, COLONIALISM AND ACCOUNTING

The influential roles of imperialism and colonialism to characterize the historical landscape of the world have been well addressed by many. Imperialism and colonialism changed many aspects of the community, particularly those in the colonies, to whom the ideology is being imparted and grounded ranging from physical to ideological setting of the colonised community. Therefore, much of the attributes of colonial physical and intangible structures in the past are traceable in today's economic, political and administrative systems of the former colonies. It was found that some negative and positive effects of colonialism and imperialism to former colonies have been so profound, lasting until today, particularly in the area of socio-economic and politics. Angeles (2007), for example, highlighted the problems of current income inequalities among former colonies as a persistent negative effect of colonialism. Meanwhile Huff & Angeles (2011) and Ferguson (2003) relate the urbanization and industrialization as well as investment flow as the positive effects. The social impact of imperialism and colonialism has, therefore, been highlighted in various manners, such as cultural, social, economic, religion, and politics. However, this paper will not be focusing on those

impacts; instead, it concentrates on the roles played by accounting and tracking the changes that had happened along the process.

Imperialism implies the process of enforcing political power and control as well as exercising economic domination over a colony by a centralized and ultimate source of power (Wesseling, 1986, p. 2). It is characterized by the act of intrusion and conquest, subjugation, economic exploitation and domination of indigenous peoples by the capitalists (Thomas, 1994, p. 1). Such an act is therefore referred to as the process of colonialism through which the effort to conquer colony and its indigenous is justified by the said centralized power (Wesseling, 1986, p. 8).

In the process of imperialism, particularly during 19th century, the utopian ideas of communal social organization became the reason behind the expansion of power of the colonials. According to that idea the advancement of society, happiness, equality, justice and other values in life should follow those developed and established by the colonial. Therefore, during the period the colonials reorganized society in the colonies in the name of imperialism and capitalism (Owen, 1841). The imperialists believed that it is the responsibility of colonials to change and develop society in the colonies. It was to be done mainly through economic approach by way of entrepreneurial ventures, envisaged via explorative and manipulative economic and commercial activities which most of the time resulted in political interference or even, in some cases, religious disputes and sentiment of the locals.

The instrumental roles of accounting in enhancing imperial and colonial process have been recorded by many. Annette and Neu (2004) review of this matter is considerably extensive. As such accounting has been regarded as an important discourse to understand colonialism and imperialism (Davie, 2000; Newbury, 2004). Accounting has been mobilized by the colonialist to support, sustain and legitimize the expansion, maintenance and control of the triangular relationship of colonialism, capitalism and imperialism (Bakre, 2008). To impart the power and reinforcing it onto the locals, accounting as a tool was credible enough to convince parties involved in transaction to sell and purchase land. Accounting enabled the value of land and political power to be exchanged (Neu, 2000a). In controlling the locals, or worst; manipulating the locals, the role of accounting has also been evident. Not only jeopardising and denying the rights of the locals (Davie, 2005), they are forced to slavery (Hollister & Schultz, 2010) and dispossession and devastation (Buhr, 2011) through colonials exploitative and oppressive acts of organizing indigenous labour (Davie, 2007). Worse, accounting had been mobilized in British West Indies to maintain slavery (in different form) after its abolishment in 1834 by way of creating complex synthesis of indoctrination, punishments, and incentives (Tyson et al., 2005) or to the worst; they manipulated accounting in a number of colonialism's genocide acts (Neu, 2000b). In brief, the colonial roles of accounting have been substantial before, during, and after the colonisation as elaborated by Bakre (2008).

According to Bryer (2000b) by 18th century accounting was adequately established to

consider good management practice and accounting profit based on the information gathered. In 19th century more complicated roles affected accounting to capture a more complex environment of capital and assets transaction, such as capital appreciation, asset depreciation, and cash management. Capital management in 18th century accepted managerialism concept in which accounting process had to address the accountability structure in the relationship between owner-manager, the role and function of independent audit process, and the move towards more accrual-based accounting. To sum up the discussion on the progression and characteristics of accounting practice in 19th century, and to distinguish it from the previous one, Bryer (1993b) asserts that decision making started to rely on cost-based accrual accounting in the expense of preoccupied economic-based valuation.

Among the capitalists themselves, accounting has been accepted as a common way to talk about the enterprise, evaluate possibility and assessing profitability, estimating the risk, and expecting the return. Briefly, accounting was applied as a medium of communicating business affairs, interpreting economic object and events, hence, accelerating the intended responses and decision making among the capitalists with regards to their interests. Such a position of accounting is traceable to as early as 13th century when the concern over equal return for equal capital was first developed in conjunction with the commercial revolution (Bryer, 1993a). In that notion accounting can be regarded as an ideology by which the belief about economic transaction is formed and legitimized, strengthened, evaluated and

progressed (Cooper, 1980). The proponent of an ideology therefore utilizes accounting to provide purposive economic rationale in the interest of a particular powerful and forceful group in society.

As the conviction about the active role of accounting in imperial and colonial settings significantly being noticed, literature has started to acknowledge wider role of accounting beyond its neutral and technical boundary, to consider also political and social aspects (Cooper, 1995; Bakre, 2008). The political and social roles of accounting during the colonial era have enabled business and transaction to take place locally and between and among countries at the international level. The supply and monitoring of capital, mechanism to measure and making decision, and planning of investment by colonial was made possible via accounting practice. Interests of colonial and shareholders over their fund and investment were safeguarded via accounting check and balance mechanism (Arnold & Sikka, 2001). In the same vein Bakre (2008) claimed that the use of accounting to produce information that attracted investor to supplement cash requirement of colonial government was evident.

Accounting, through its ideological strength and technological advancement has enabled economic activities to progress. By inculcating calculative mentality, for instance, accounting provides a logical structure to be referred to by various stakeholders to understand, interpret, and to respond to economic information. More importantly is its role as a medium for interested parties to share similar language and understanding about transactions and their economic consequences. Its

technological substance, in the mean time, provides a standard and reliable measure to interpret the process and outcomes of a particular economic event. Although the theoretical and ethical aspects of these ideological and technological components of accounting remain debatable, their role and position in economic progression is widely acknowledged. One of the important functions of accounting in that manner is to clarify and objectify broad economic concepts. This enables the meaning of economic activities; particularly the input, process and output, to be signified and justified. In this notion Weber contends that calculative mentality of modern capitalism, via accounting technology, enabled the maximization of the rate of return and capital distribution to be visible (Bryer, 2000b).

Capitalism's profound effect on society encouraged economic and accounting historians to hypothesize the importance of double entry bookkeeping to its development. The need for more capital to synergize more explorative investment led to the accumulation of funds contributed by many investors. This was considerably more complicated than before where capital was generated through a relatively limited number of source, such as family members or a group of fund providers with certain informal forms of relationship. As the former was more complicated it needed a more accountable management system. With regards to its accounting system it must be able to capture the needs to address the issues of accountability structure. With a much bigger amount of funds contributed by many whom did not have informal relationship, the accountability structure was more demanding as well. A more reliable accountability structure also demanded the

agency structure of enterprise management that relied on professional managers to run and look after operation in colonies.

As the capitalists' activities expanded the accounting practice has also progressed and changed. With regards to the expansion of capitalist activities and their relationship with the progression of accounting practice, Sombart (1953) argued that the continual reinvestment of the profits earned depended on the existence of a capitalist form of double-entry bookkeeping. Double-entry bookkeeping in this context allows investors and managers to measure the return on investments as a means of making rational business decisions. The transfer of accounting technology from capitalist countries to colonies in line with the expansion of over sea trade and investment has been well addressed by Samkin (2010).

Hence, this paper attempts to explore the phenomena of accounting practice, from a historical perspective, by looking into the changes occurred during the tenure of a British Chartered Company in the North Borneo. As the notion that accounting has changed, is changing, and certainly to change in the future is accepted (Napier, 2006) the importance to understand the past in order to explain its present and future has been acknowledged by many for years (Mills, 1993). This paper insists, therefore, that it is important to understand the practice and change process of accounting during the colonial era of the North Borneo in order to understand the current practice.

In Southeast Asian region, particularly the North Borneo, colonialism process started to embark during the later part of 19th century. Accordingly, traditional political organization

in that area was swept away and replaced by colonial rule with centralized administrative and legal systems (Huff & Angeles, 2011). The position of North Borneo during that era, as the background of this study, is explained in the following section.

HISTORICAL BACKGROUND OF THE OCCUPATION IN THE NORTH BORNEO

This paper upholds the importance to understand the dynamic phenomenon of accounting practice. As a social practice, how and why accounting practice changes and developed over time must be understood. Not only to provide an answer to those questions, how the current practice related to the previous one, should also be explained. As mentioned by Bryer (2000a), to understand, be able to explain, and appreciate social significance of accounting today we must understand its technological and ideological parts as products and producers of history. Through the archival evidence and other reliable references, this paper provides a useful and authoritative reference for the future generation to refer. To quest such an accounting context of the past, this paper investigates the changes and development of accounting practice during the Colonial era in the North Borneo within the period of 1881-1941.

The period of 1881-1941 was the era when North Borneo, as the State of Sabah (of Malaysia) was formerly known before the World War II, was under the administrative power of a British Chartered Company; The British North Borneo Chartered Company (BNBCC hereafter). BNBCC functioned as a governmental entity with legal and bureaucratic structure empowered by

Central Government of British in London. For about 61 years BNCC had ventured into the economic activities in the area, particularly in the form of agricultural and fishery activities, as well as extracting mineral resources and forest produce of North Borneo. Those products were mainly exported to the overseas market, such as America, Netherland, England, other countries in the European continent, Japan, China, and Hong Kong.

Economic activities were carried out by the companies and enterprises those who opened up their plantation and mining area, built up processing centre, and investing their money. Most of the capital providers or shareholders came from established capitalist countries, such as England, US, Netherland, Spain, France and Germany. The activities ranging from the plantation of rubber, tobacco, cocoa, Manila hemp, processing of sago and marine product, mining of coal and gold, to the harvesting of natural products such as bird nest and timber. As a commercial entity that operates for profit and taking care of shareholder's investment, those enterprises were deemed to be dependent on accounting on financial and accountability matters. Accounting was mainly used for performance measurement, planning and decision making, and fulfilling accountability requirement in the relationship between managers and shareholders. BNCC as a government entity (in North Borneo) was also practiced comparable form of accounting practice as they needed to consider also the interest of their shareholders (in London) who invested their money on commercial basis.

As the economic and commercial activities within the area of North Borneo progressed

during colonial era, the accounting practiced also changed. Although the practice was not totally similar for companies that come from different countries, many characteristics of their practice can still be compared to trace their similarity in order to map certain common ground of accounting practice and the changes that occurred. For example cost control effort and emphasis on labour cost component, at certain period, were the main focus among the companies. The emphasis on the same issues in their respective accounting practice was evident because they shared the same pressure on the aspect. These phenomena were observable via the financial and accounting record as well as other related archival records.

Throughout the period under study (1881-1941) accounting practice changed as the economic and commercial activities in the North Borneo progressed. The progression was not only characterized by the increases in the quality and quantity of economic activities but also a series of financial crisis, economic downturn, political haywire, market crash, and power conflict. To capture the essence of accounting changes during the period under study this study employs historical approach of investigation process described in the following section.

METHODOLOGY

The orientation of this study is historical in nature. Examination on the changes of accounting practice during the specified period is conducted focussing on contextual and progressive settings affecting accounting practice. Essentially the attributes of accounting practice, the

rationale behind it, its developmental phase and pace, and the environmental changes occurrences become the focus of this study.

This study examines the archival records that are directly and indirectly related to the accounting practice during the identified period. Accounting records and financial reports are the main source of data because they provide specific description on how accounting was practiced. The processual examination offers comparative analysis to describe and prescribe the change and developmental process of accounting practice. In addition, informative source of data in relation to accounting practice was obtained from the archival records of economic and commercial activities in the North Borneo itself as well as those reported at the international level. Historical evidences affecting the economic and commercial arena during the period under study provides contextual settings of the accounting practice. It is particularly relevant if the notion of accounting practice, both as a medium and product within such a context, were to be considered.

This research synthesises both qualitative and quantitative historical data available at The Sabah State Archival Department³. Besides employing qualitative methodology that usually dominate accounting historical analysis, this research applies basic statistical analysis in the form of descriptive analysis on financial records of the North Borneo, as proposed by Gomes et al., (2011) who insist on the application of both methodologies to enhance the rigorousness and credibility of an accounting historical research. An examination was carried out on

³ Department responsible to keep and maintain archival records for the State of Sabah, one of the states in Malaysia.

the abovementioned records covering the period of 61 years (1881-1941). They are in the form of annual financial statements and periodical accounting reports. Other financial-related records were also examined, such as minutes of the company meetings, periodical reports, and newspaper cuttings. Archival accounting-related records were examined to detect their ideological and technical aspects. Periodical reports submitted to the third parties, for example, provided evidence of accounting technology while internal reports such as cost analysis and the like demonstrated the ideological parts accounting practice. These evidences were validated with other supporting evidences, such as economic reports, and policies set by regulatory bodies. They were later analysed through a method called pattern modelling (Johnson, 1996). Further validation was carried out by comparing the findings with other researchers' findings and their theoretical assertions.

FINDINGS

The changes in accounting practice in the North Borneo during the period under study (1881-1941) can be divided into three periods of developmental process. The first period was the **exploration phase** whereby BNBC and other investment companies started to explore the economic potency of North Borneo. It happened for about ten years (1881-1890). The second period was the **competition phase** whereby the economic activities in the North Borneo started to be exposed to international market trend and global market challenges. This period was about 25 years (1890-1914). The third period was the **recovery phase** whereby BNBC and companies

in North Borneo were struggling to recover from the economic turmoil that caused by the WWI that occurred within the period of 1914-1918. It happened for about 27 years (1914-1941) before the WWII started in 1941. Accounting practiced during these periods was distinguishable as each of them experienced different environmental pressure and technically they have to response to different economical and industrial needs.

During the period of 1881-1941 the economic landscape and commercial activities in the North Borneo had changed dramatically in response to the aspiration of the shareholders and the trends of the global market. Along the line accounting practice in the North Borneo, as an important part of the economic activities and commercial enterprise, had also changed to supplement the needs of the business activities and commercial enterprises. The practice of accounting, both in its ideological and technological terms, had been mobilized to support interested parties in dealing with their interest, ranging from the planning process, implementing and executing the investment programs, monitoring and controlling the results, as well as evaluating the performance. Investigation on the accounting practice and the change process that occurred along the period had characterized three consecutive periods whereby the practice was distinguishable and the change processes were traceable through three change properties; form of practice, focus of practice and the environmental factors that were influential to those changes.

Period I (1881-1890) – Exploration Phase
BNBCC started to conquer North Borneo

in 1881 after temporarily granted to a provisional entity; The British North Borneo Provisional Association Limited. The entity was purposely formed to enable Gustavus Baron Von Overbeck and Alfred Dent to apply for a formal charter to British Central Government in London to take charge of North Borneo⁴. BNBCC started to explore the economic potent of the North Borneo immediately after the Royal Charter was granted by the Parliament of British. Apart from exploiting its economic resources the British Government also appointed BNBCC as the caretaker of North Borneo to safeguard its political interest to sustain its imperial policy and colonial agenda. While considering its own economic and commercial agenda, as a proxy of British Government in the North Borneo, BNBCC had to consider too the political strategy of the former.

In the early stage efforts were devoted more to attract investors and their capital to North Borneo. Intensive capital inflow was needed to finance the development of infrastructural facilities in the area, such as road and telegraph, ports and shipping facilities, public amenities, police and security measure, and other operational requirements. To attract investor not only physical infrastructure was required, financial incentives and promotional activities were also necessary. Those efforts were deemed necessary to convince investors towards the economic potent of North Borneo. However, the effort to attract direct and indirect investments

⁴ *Overbeck was a General Consulate of Austria-Hungary who, earlier on, attempted to get the lease of the area from The American Trading Company. The later was granted the leasing right by the Sultanate of Brunei in 1965. Alfred Dent was the director of Dent Brothers and Co. who was successfully influenced by Overbeck to enter into an agreement to form BNBCC.*

**Table 1: Statistics Of Import, Export And Trade Balance Of
The North Borneo Between 1881-1941⁵**

Year	Export	Import	Trade Balance	Year	Export	Import	Trade Balance
1881	145,443	160,658	(15,215)	1912	5,662,908	5,476,214	186,694
1882	133,655	269,597	(135,942)	1913	7,398,128	5,438,897	1,959,231
1883	159,127	428,919	(269,792)	1914	6,260,281	4,755,283	1,504,998
1884	262,758	481,413	(218,655)	1915	865,561	522,648	342,913
1885	387,757	626,776	(239,019)	1916	1,014,142	500,933	513,209
1886	524,724	849,115	(324,391)	1917	1,076,074	624,478	451,596
1887	535,267	958,642	(423,375)	1918	1,019,094	761,358	257,736
1888	525,875	1,261,997	(736,112)	1919	1,453,990	925,235	528,755
1889	701,433	1,799,620	(1,098,187)	1920	1,405,772	1,284,438	121,334
1890	901,290	2,018,089	(1,116,799)	1921	922,616	900,668	21,948
1891	1,238,277	1,936,547	(698,270)	1922	957,333	800,933	156,400
1892	1,762,216	1,355,864	406,352	1923	1,213,845	770,987	442,858
1893	1,780,593	1,116,714	663,879	1924	1,301,715	827,662	474,053
1894	1,698,543	1,329,066	369,477	1925	2,083,800	854,399	1,229,401
1895	2,130,600	1,663,906	466,694	1926	1,987,233	970,319	1,016,914
1896	2,473,753	1,882,188	591,565	1927	1,803,934	1,050,043	753,891
1897	2,942,293	1,887,498	1,054,795	1928	1,332,207	995,411	336,796
1898	2,839,844	2,419,087	420,757	1929	1,362,738	964,340	398,398
1899	3,439,560	2,456,998	982,562	1930	1,049,472	744,729	304,743
1900	3,326,621	3,178,929	147,692	1931	817,717	447,995	369,722
1901	3,382,387	3,262,763	119,624	1932	677,751	390,541	287,210
1902	3,671,004	3,807,621	(136,617)	1933	702,526	394,093	308,433
1903	3,621,000	3,229,309	391,691	1934	1,129,804	515,899	613,905
1904	4,272,671	2,896,262	1,376,409	1935	912,234	554,772	357,462
1905	4,537,486	2,836,676	1,700,810	1936	1,048,339	560,545	487,794
1906	4,857,943	2,988,976	1,868,967	1937	1,667,788	742,226	925,562
1907	4,332,913	2,921,100	1,411,813	1938	1,111,340	723,552	387,788
1908	4,572,011	2,754,788	1,817,223	1939	1,345,349	649,977	695,372
1909	4,575,612	2,918,307	1,657,305	1940	2,027,050	997,841	1,029,209
1910	4,609,021	3,801,306	807,715	1941	NA	NA	NA
1911	4,836,795	4,603,071	233,724				

⁵ Extracted from the archival records of *The North Borneo, 1881 - 1941*.

was rather difficult for BNBCC. Despite its promising economic return potential investors were sceptical about the operational and financial risk of such a long-term investment in physical development. The existing shareholders, in the mean time, particularly those of BNBCC, expected instant return from their investment. As such annual shareholder meetings were used to be disrupted by the issue of dividend payment, as evident in the archival records of the companies' meeting. Meanwhile the sceptical perception on the potential return of investment in North Borneo was also badly affected when it was compared with other established colonies such as Hong Kong, India, Indonesia, and Africa. Worst still, some simply compared the expected return with a better return of conventional and lower risk investment such as money lending and deposit business in London. This was particularly evident among the potential investors as can be observed in published articles during the period.

Such a vigilant and meticulous analysis by investors was an impediment to the effort to accelerate business and development activities in the North Borneo. As a consequence North Borneo recorded a negative trade balance during the period as depicted in Table 1. Much of the revenue generated by the North Borneo during the period was contributed by tobacco that reached its peak performance towards the end of 1890s. Tobacco was first introduced in the North Borneo in 1883 by Mr. A Mc D Gibson and it reached London market by 1885. Thereafter, the plant gained its reputation, became the main commodity before experiencing a disastrous price problem due to the enforcement of McKinley Tariff Bill by the Senate of US in 1890 to

protect local tobacco planters in US. Few other commodities were also explored such as rubber, copra, Manila hemp, coffee, pepper, sugarcane and fruits.

The priority of BNBCC during the Period I was obviously the establishment of basic infrastructure and physical development. However, as a government, BNBCC was relying very much on indirect revenue, such as tax and service charges imposed on individuals and trading companies. Such a wide area of North Borneo really needs a significant amount of developmental and capital expenditure for BNBCC to administer. As such, the amount of revenue generated by BNBCC as a government was too small to cover administrative costs of North Borneo. Other enterprises operated in the North Borneo were also struggling to generate a satisfactory yield except for a number of tobacco planters managed to secure a reasonable dividend rate.

Simple and straight forward accounting was practiced during the period which mainly served the basic purpose of recording and reporting. Recording of capital, asset, income and expenditure was to scrutinize the utilization of fund while expenditure and income records were to analyze and itemize operational and production costs. Financial reports, as attached and presented in shareholders meeting, aimed at providing proper record for the receipt and disbursement of fund, particularly to record the procurement of asset, purchasing of material, payment of labour and other operational costs. Cost per unit of production and elemental portion of labour, material, and overhead costs were the main element in production reports.

Figure 1: Cost Structure Of Cultivating Black Pepper⁶.

PEPPER :—COST OF CULTIVATION.			
1st. year.			<i>Per acre.</i>
Superintendence	..	..	R10.00
Felling,* chena	..	..	8.00
Nurseries	..	..	10.00
Weeding 8 months	..	..	8.00
Lining	..	..	1.50
Holing	..	..	9.00
Filling in	..	..	9.00
Draining and roads	..	..	12.00
Planting and shading pepper	..	..	6.00
Planting cotton	..	..	2.00
Tools, buildings, contingencies, etc.	..	..	20.00
			<hr/> R95.50 <hr/>
2nd. year.			
Superintendence	..	..	R12.00
Nurseries	..	..	2.00
Weeding	..	..	12.00
Roads, drains	..	..	1.00
Terracing	..	..	8.00
Manuring	..	..	5.00
Pruning and training vines	..	..	3.00
Supplying	..	..	1.00
Buildings, contingencies, etc.	..	..	10.00
			<hr/> R54.00 <hr/>
3rd. year.			
Superintendence	..	..	R12.00
Weeding	..	..	12.00
Roads, drains	..	..	2.00
Manuring	..	—	10.00
Pruning, training vines	..	—	3.00
Supplying	..	—	1.00
Building, etc.	..	—	10.00
			<hr/> R50.00 <hr/>

⁶ *The British North Borneo Herald, No. IV, Vol.1, 1st September 1883, p.28*

Details of operational costs of those companies were made available to BNCC management for analysis and recommendation. It was published in the North Borneo Herald for the existing companies and the potential investor to take note. Figure 1 depicts an example of published operating cost of cultivating black pepper as published in The British North Borneo Herald in September 1883. Officials of BNCC used to publish their analytical report on the comparative operational and production cost among companies in North Borneo. Sometimes similar information from other colonies was also comparatively published.

Although the form of accounting practice during the period was considerably simple and straightforward, its legitimate position and function among the managers and enterprises were noticeable, particularly as a dominant medium of business communication, sensible mechanism of valuation, and authoritative judgemental elements in decision making. Expenditures such as plant and plot maintenance were classified interchangeably between development and operational expenditure. The process of income recognition was also inconsistent whereby sometimes non-revenue receipts were recorded as an operational income.

Accounting reports used to be the main agenda in shareholder meeting, with its technical aspect rarely questioned, and heavily relied on to judge the firm and managers' performance. Evident in the official gazetted reports of BNCC was the compulsion for the industries to together develop North Borneo. As such operational and production costs were made publicly

available for them to learn from each other. Based on that, the element of competition in its real sense was not discerned at that stage. Meanwhile, cost accounting practiced, based on the published reports, was so basic that it only included cost of material and labour and total and unit cost. In that sense, the progression of cost accounting in North Borneo, during 1881-1890, was lagged behind colonial countries or other colonies as researchers reported that cost accounting in other colonies during the era had already been developed since the beginning of 19th century (see Antonelli et al., 2009; 2008).

The accounting practice started to take a more complicated form at the end of 19th century. As mentioned by Antonelli et al., (2009, p. 492) such a change used to be "*hand in hand with the growth of the business, a rise in competition and the development of an increasingly complex internal structure that followed a strategy of vertical integration*". It is in line with the opinion of Bryer (1993b) who claimed that cost-based accounting started to gain attention in the late 19th century to overcome the shortcomings of conventional or economic income based accounting. Therefore, subsequent to that, another form and focus of accounting practice had emerged as elaborated in the following section.

Period II (1890-1914) – Competition Phase

The enforcement of McKinley Tariff Bill by the Senate of US in 1890 was really a downturn to BNCC and companies operated in the North Borneo. As can be observed in Table 1 the trade deficit of North Borneo worsened in 1890. The management of BNCC and

of those companies in the North Borneo, especially those which relied heavily on tobacco as their main commodity, started to consider a more strategic way of managing their enterprise. Competitive advantage was clearly the influential factor as those companies started to consider market pressure on the price and cost of their products as these suppressed the annual revenue and profit.

In the earlier part of the period the market crisis experienced by tobacco planters was the main issues in the North Borneo. This is due to the over reliance on the commodity during Period I whereby investment mainly focused on tobacco plantation. For example it was reported that towards the end of 1880s many companies in North Borneo restructured their capital and operation to allocate more fund for newly planted area. Some increased their paid-up capital, executing bonus issue of capital, delayed the payment of dividend, and even raised their fund through borrowing or issuing financial instrument such as bond and debenture⁷. To enable those strategies company like The East Borneo Planting Company Limited opted for a more drastic measure by way of winding up the existing company so that the new entity could be formed to enable a new capital structure to be in place⁸. Most of the companies in North Borneo demonstrated opportunistic investment plan and operational strategy as the market prospect of tobacco commodity overwhelmingly highlighted among industry players.

7 *The British North Borneo Herald*, No.VII, Vol.VIII, 1st July 1890; Notes on the recent development, explorations, and commercial geography of British North Borneo, p.208.

8 *The British North Borneo Herald*, No.IV, Vol.VIII, 1st April 1890; The East Borneo Planting Company, Limited, pp. 107-108.

Unfortunately, few years later, such an intense investment on tobacco plantation was severely hampered by the market crisis. Since the supplier in North Borneo was powerless with regards to the external market price the fastest way to mitigate the situation was through internal mechanism; cost control. Some drastic measures were taken for that purpose. Operation was reschedule with a minimum level of plantation maintenance works, postponement of new planting program, abandonment of less economic plot area, contracting out some cultivation processes to labour, and considering the trade-off between quality of tobacco produce and the quality cost involved were among steps taken.

For example in 1890 the companies started to analyze the attributes of fixed and variables components of coffee cultivation costs in order to determine the most economical level of cultivation and production⁹. Labour cost, as the main component in plantation activity, was given special attention. This led to detail analysis on labour costs which included financial advance given by the plantation company to migrate them to North Borneo, the cost incurred consisted of brokerage fee on their migration, welfare and health cost of labourers, productivity in relation to their origin and benefit provided by the employer, up to the educational background and skill of the labourers. This is implied in an article published in *The British North Borneo Herald* in August 1892 "*The recent fall in tobacco prices accentuates the necessity of saving as much as possible in*

9 *The British North Borneo Herald*, No.VII, Vol.XIV, 1st July 1897; Planting prospects in British North Borneo, p.169.

10 *The British North Borneo Herald*, No.9, Vol.XIII, 1st August 1895; *British North Borneo Herald*, p.197.

*the way of labour wages*¹⁰. Examination on a series of archival documents in Malaysian Archive Department (since 1881) shows that prior to that such an analysis has never been done in North Borneo.

In accounting practice a detail analysis was implied in the way transactions were being recorded. In costing process, for example, the determination of cost per unit of product was so stringent so that the comparison between and among alternatives can be done, such as to harvest or to abandon matured area, reducing or rescheduling harvesting process for the sack of utilising the existing labour, or totally abandoning certain cultivated area can be done. Certainly the flexibility of certain costs to certain level of production, their controllability as well as sensitivity to the changes in the level of production was also analyzed¹¹. Meanwhile in recording and reporting practice the management of enterprises exhibited an effort to imply a better company picture to the shareholders so that the confidence of the later can be restored and their anxiety about the risk of their investments in North Borneo can be mitigated. An option to capitalize revenue expenditure was popular among the management to portray a better income statement, as what was done by The British North Borneo itself in 1895 which involved an amount of £71,900 revenue expenditure¹². Interestingly, this resembles what is reported by Bryer (1993b, pp. 649-650) about the absence of a clear conceptual foundation for accounting in the late 19th century:

"It is almost universally accepted that MFR [modern financial reporting] had no clear conceptual foundation and that management was able to manipulate published accounts in its own interest... the management was a powerful agent, able to manipulate published accounts in its own interests because the accounting authorities did not explicitly conceptualize MFR..."

Another strategy adopted during the period, in order to rescue tobacco-dependant companies, was to introduce other potential commodity such as coffee, sago, sugarcane, black pepper and Manila hemp, and a number of cash crops such as vegetable and rice. Of course these was not suggested and implemented without detail cost analysis. Rubber was formally introduced in North Borneo as a plantation crop for Sekong Estate in 1898¹³.

Approaching 20th century tobacco price showed its recovery and better demand and price was recorded. Towards 1910 the growth rate of revenue of companies in North Borneo was considerably satisfactory. This led to a healthy growth rate of BNCC revenue in between 10-15 percent yearly. The shareholders of the companies started to emphasize on a more sustainable source of fund which was retained earnings and reserve instead of a more burdensome and riskier source of financing such as debt and long term loan. Preference share to the

11 *The British North Borneo Herald*, No.15, Vol.XXXII, 4th August 1914; North Borneo Rubber: Future prospects, p.123.

12 *The British North Borneo Herald*, No.5, Vol.XIII, 1st May 1895; *British North Borneo Herald*, p.98.

13 *The British North Borneo Herald*, No.3, Vol.XLIV, 2nd February 1926; *The North Borneo Trading Company Limited*, p.11.

14 *The British North Borneo Herald*, No.18 Vol.XXV, 1st February 1907; Half-yearly meeting of the British North Borneo Company. p.178.

existing shareholders was a popular option specifically to protect the ownership of the company¹⁴. A distinguishable characteristic of accounting practice during the period was the emphasis on liquidity and capability of the companies to sustain vulnerable market condition at that time. In 1907 for example the shareholder of BNCC started to question the real value of land in North Borneo that recorded high in financial report despite low accounting income it generated¹⁵.

More detail costing system was developed, as compared to Period I, with comprehensive analysis and report on labour cost, as the main component of plantation operation in the North Borneo. For example in 1897 plantation managers started to compare the cost and productivity of labourer more objectively, as quoted in an article; *"It must be confessed that the common saying "one Chinaman is worth three Klings" has a very solid substratum of fact behind it..."*¹⁶. In this the cost versus benefit of employing Chinese and Indian labourers was compared. The sensitivity analysis on the immediate effect of labour cost on the overall production cost was also presented in its raw form in 1890¹⁷. In the area of record keeping and reporting the effort to better transpire the financial position of business entity was evident in this period. One of the exemplary transactions was the adjustment made in 1895 amounted to £71,900 which was earlier on (in 1890)

classified under capital expenditure¹⁸. Cost classification and income recognition was more stringent amidst the growing concern of the shareholders about the risk and survival of their investment. This is in tandem with the reported progression of accounting classification in England during the period about detailed heads and sub-heads of account (Higgs, 1914, p. 23-24).

The way accounting being practiced in between 1890-1914 was influenced by the downfall of tobacco price, as the main commodity, in the early 1890s and the outset of WWI in 1914. Subsequent period was denoted by the recovery effort which also stimulated another change in the accounting practice in the North Borneo, as elaborated in the following section.

Period III (1914-1941) – Recovery Phase

The economic recovery process of North Borneo at the earlier part of 1910s was once again impacted by another political turmoil; the WWI (1914-1918). However the impact was not severe and only temporary in nature which can be observed in a temporary fall in the international trade of North Borneo in 1915. The statistics of imports and exports depicted in Table 1 shows the effect of WWI on the trade balance of the North Borneo that can be better observed in Figure 2. The trend of trades in Period III shows that North Borneo was struggling to recover from the effect of the market crisis of tobacco.

Based on Figure 2 the fall in trade performance was so drastic, both in the form of export and import, in 1915 as compared to the preceding year; 86 percent fall in export (from £6,260,281 to £865,561) and 89 percent fall in import (from £4,755,283 to £522,648). The trend afterwards exhibited

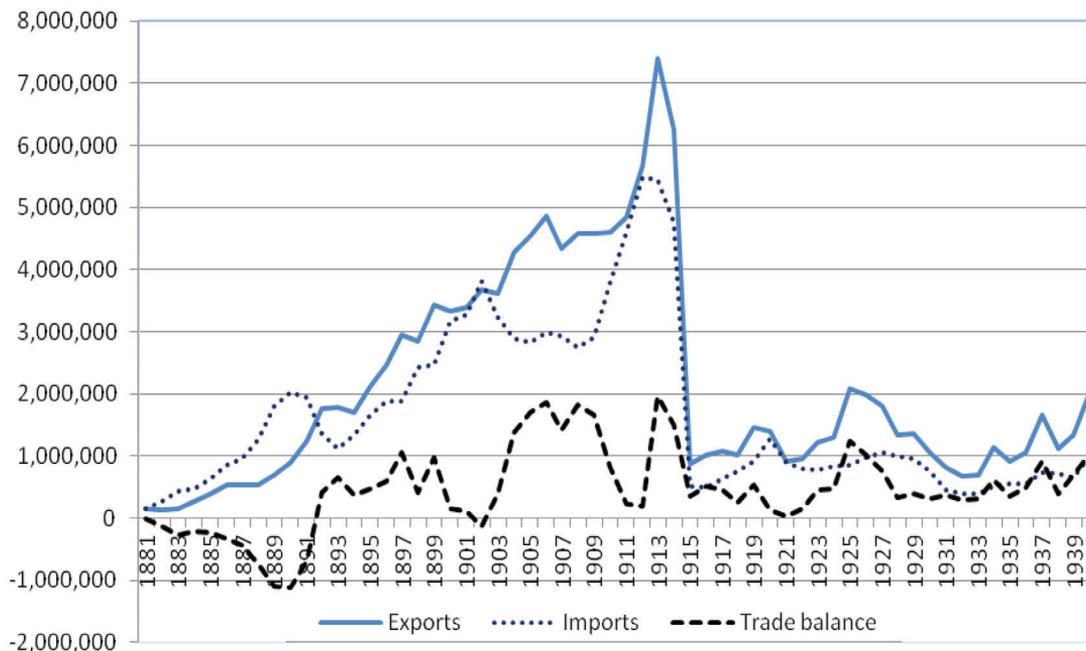
15 *The British North Borneo Herald*, No.3, Vol.XXV, 1st February 1907; *British North Borneo Herald*, p.30.

16 *The British North Borneo Herald*, No.1, Vol.XV, 1st January 1897; A new aspect of the labour problem, p.3.

17 *The British North Borneo Herald*, No.XII, Vol.VIII, 1st December 1890; The coolie question in North Borneo, p.392.

18 *The British North Borneo Herald*, No.16, Vol.XIV, 16th August 1896; *British North Borneo Company*, p. 245.

Figure 2: Trend Of Exports, Imports And Trade Balance Of North Borneo Between 1881-1940 (In £).



discouraging progression despite a steady movement in export and export value and relatively stable trade balance along the way.

Although the demand for export and import was not as encouraging as in the Period II, the yearly growth rate was rather stable in Period III. This was mainly contributed by the rise of rubber price in the early part of 1920s. Thereafter, the role of tobacco as a prime commodity for North Borneo was replaced by rubber. In the early part of 1930s a number of companies that totally depended on tobacco were closed and wounded up¹⁹.

¹⁹ *The British North Borneo Herald*, No.2, Vol.LII, 16th January 1934; The new Darvel Tobacco Plantations, p. 18.

The promising return of investment in rubber plantation was also negatively affected by a number of economic and market crisis. They were economic crisis in 1926 and world rubber price crisis in 1930 that witnessed a drastic fall in rubber export amounted to £231,465 (22 percent) in 1931. As a consequence some companies minimized their production while others suspended the production process²⁰. There was an initiative to recover the world's market price for rubber via a special scheme called The International Scheme of Rubber Regulation in 1937 and 1938. However the recovery was insignificant, temporary and only sustained within those two years. The effect of rubber price crisis on North Borneo

²⁰ *The British North Borneo Herald*, No.1, Vol.LII, 3rd January 1932; Sabalas North Borneo Rubber, Limited, p. 6.

development progression was indeed significant. The fall of export value of North Borneo by 78 percent in 1938, for example, was contributed mainly (24 percent) by the fall in the value of rubber export.

Towards the end of the period, i.e. close to 1940s, the financial crisis faced by BNCC was aggravated by the rumours of another international political conflict; WWII. Unfavourable consequences experienced subsequent to WWI led to a sceptical perception and doubtful view among the managers and shareholders in the North Borneo about the prospect or survival of enterprises. The market and price of commodity was distorted, transportation cost (particularly insurance) increased, supply of material badly affected, and the cost of production was relatively much higher than the yield of the produce. 'Wait and see' approach was employed in decision making process in which dividend payment was accrued, planning and development program was pessimistically executed, and conservative and careful financing activity was demonstrated²¹. Overall, the effort to put in place the recovery of North Borneo in Period III was not successful. Immediately after the WWII North Borneo was taken over by the Central Government of England and converted to become a Royal Colony. Subsequently, the management of BNCC was dissolved.

The accounting practice in Period III was devoted to assist the management of the companies to stay survive in a highly uncertain environment. Uncertain demand and fluctuate price level of major

commodities, such as rubber and tobacco, and political and security distortion caused by WWI and WWII had led to a more structured capital management and more sophisticated recording and reporting approach. Economic crisis during 1920-1924 led to the tendency among the stakeholders to reconsider the value of asset and investment of business entities in North Borneo. This caused conflict between the management of BNCC and the shareholders. Consequently, in 1925 a special independent committee; Howitt Committee, was commissioned to supervise the preparation of BNCC's financial statement in order to protect the interests of stakeholders and ensuring the use of market value in assessing the cost of assets and investment²². This initiative was followed by few other investment companies in North Borneo. For example in 1926 for the first time in North Borneo the amortization of capitalized development expenditure was executed by Sapong Rubber and Tobacco Estates Limited²³. In 1930s the diminution of BNCC's investment value that mainly consisted of physical infrastructure such as road and communication system, shipping and port facilities was argued despite its total ownership and control over North Borneo. The notion that the survival and revenue of BNCC was highly depended on indirect revenue generated from service fee paid by other companies, which were also affected by the crisis of commodity price, was hardly accepted by the shareholders²⁴.

21 *The British North Borneo Herald*, No.16, Vol. LVII, 16th August 1939; Company Meeting: British Borneo Timber Company, Limited, p.169.

22 *The British North Borneo Herald*, No.17, Vol.XLIV, 16th September 1926; British North (Chartered) Co., p.176.

23 *The British North Borneo Herald*, No.16, Vol.XLIV, 16th August 1926; Sapong Rubber and Tobacco Estates Limited: The reserve accounts, p.157.

24 *The British North Borneo Herald*, No.19, Vol.XLVI-II, 1st October 1930; British North Borneo Company, pp. 169-174.

A number of companies were wounded up and for BNBBCC itself financial crisis was burdensome. Most of BNBBCC's revenue was allocated to serve its debt and was not even sufficient to cover operational costs²⁵. Accounting process was mobilized to optimise resources, minimize costs and liability, enhancing liquidity and profitability. The rehabilitation of plantation plots and written off the unproductive one, which value was previously posted to capital account, was then re-charged to profit and loss account to match with future prospects of those items²⁶. Effort to consider matching concept in this context was more evident. However within an uncertain environment predicting future prospect and possible risk was rather difficult. This made accounting treatment complicated and consequently led to conflict between managers and owners of the enterprises.

As such Cost-Volume-Profit (CVP) analysis started to gain attention to determine the net effect of any decision related to rubber plantation, particularly the function of the sensitivity profit and revenue against cost variables. Beaufort Borneo Rubber for example started the initiative to consider likely future cash flow, time value of money (in its simple form), and comparing current market structure and future potential profit²⁷. Such comprehensive and future oriented financial management, analysis, and reporting system was indeed a

distinguishable characteristic of accounting practice in period III as compared to previous periods. The global emerging concern over the cost-volume relationship to that end was reported by many (for example by Antonelli et al., 2009; 2008) and most of them claimed that it was associated to the rise of scientific management attributable to efficiency and mass production (Loft, 1986).

DISCUSSION AND CONCLUSION

The above findings exhibit evidence of accounting changes in the North Borneo during the period 1881-1941. The changes are attributable to three properties of change; form, focus and environmental factors that were influential to those changes.

First, the forms of practice had changed from its simple and straightforward form to a more complicated and sophisticated one. At the beginning, the operation of companies in the North Borneo was straightforward; to explore the area by starting up capital investment in the form of basic facilities, perform site preparation and early stage of crop planting. Apart from recording capital investment and basic transaction of material acquisition and labour employment for operation, simple forms of reporting had also been practiced to inform companies' headquarters about the progress and expansion in the North Borneo. Competition started to influence the way accounting was practiced as North Borneo was exposed to global market trend and price crisis in period II. Competition among local companies, particularly with regards to labour supply, was also influential in a sense that the way labour cost was treated was more comprehensive and carefully

25 *The British North Borneo Herald*, No.16, Vol.LIV, 17th August 1936; *The British North (Chartered) Company*: President's speech, p.209

26 *The British North Borneo Herald*, No.17, Vol. LIV, 1st September 1936; *Laws Sarawak Estates, Limited*, p.236.

27 *The British North Borneo Herald*, No.7, Vol. LVII, 1st April 1939; *Company Meetings: The Beaufort Borneo Rubber Company Limited*, p.88.

scrutinized. In Period III, amidst external and internal pressure to recover, accounting process was scrutinized to consider internal restructuring, improving liquidity, and mitigating the case of capital bleeding. However Great Depression prior to WWII (1930-1940 roughly) had a devastating effect on the recovery effort. Accounting practice was under pressure to assist management to re-organise business in light of a series of stringent courses of action to minimize lost. Certain consideration needed to be taken, for example, to choose between totally abandoning or temporarysuspending operation. Accounting in that context was employed to rationalize meticulous decision.

Second, the focus of the practice had changed from self-contained in the Period I, to the focus on competitive needs in Period II, and finally to recovery and maintenance focus in Period III. At the beginning BNCC and other companies in the North Borneo concentrated their effort to tap the opportunity without much consideration to compete among them. Plenty of land to be developed and BNCC as the government gave its full support for all companies to start their venture. Period II, a more competitive phase, witnessed struggles among those companies to look for sufficient supply of labour, good and strategic location of fertile land area for concession, and input for their economic activities such as material and rice for labour. Competition in the form of market segment and market price for commodity was also apparent in Period II. Period III marked by worst market crash for commodity of North Borneo, and international political turmoil due to WWI and WWII led the management of companies in North Borneo to focus on the recovery of their financial problems, maintenance of

the existing properties and facilities, and to some extent ceased operation and liquidated assets and wound up the companies. These focuses had influenced the way accounting operation being practiced, as elaborated in the previous section.

Third, the environmental factors that influence the changes in accounting practice were different from one stage of change to another. They are observable as the internal and external environment of North Borneo during those periods changed. The change between Period I and Period II was marked by the intensification of competition in the domestic market, i.e. demand for labour and material for production, and in international market, i.e. demand and market price for commodity which was subjected to deterrence and manipulation by the buyer and market players. From Period II to Period III the accounting practice was once again forced to consider the needs to recover the market, ensure the survival, and minimizing the loss. Accounting options were scrutinized by the managers to do their best level to protect the interest of the shareholders and going concern of the companies. They were the agents and medium of accounting technology development in the North Borneo, similar to what happened to other colonies, as claimed by Carnegie and Parker (1996). This implicates the managerial perspective in two ways. First, accounting technology can be mobilized to enhance managerial process as such to consider the ideological interests of an organization. Second, the mobilization of accounting technology by managers should be appropriately executed to avoid misused, particularly in the area of managerial accounting process.

The change process illustrated in this case

provides the evidence conforms to a number of previous claim about accounting practice and its transformative phenomena. First, it demonstrates the dynamic of accounting practice subject to environmental needs and forces. Second, form and focus of accounting practice, as a technology, used to change in line with the complexity faced by the enterprise. Third, the influential factors to the change process of accounting practice could be different from one stage to another due to different context of environmental forces experienced by the accounting practice. This case illustrates comparable findings as compared to the case presented by Maltby and Tsameny (2010) who found evidence on the mobilization of accounting both in booming and recession period via accounting change process.

It is to note that this study was carried out based on the archival documents available at the Archive Department of the State of Sabah, Malaysia. More concrete evidence could be retrieved from other archival centre such as in London, Brunei and Netherland. Archival records for certain periods such as WWII are hardly available as they were destroyed due to war policy. More investigation should be carried out on those evidences so a more complete picture of the accounting change phenomena of the period can be explained. More research should be executed at the neighbouring area, such as Sarawak, Kalimantan and Southern Philippines to produce comparative findings so that the findings of this study could be further validated.

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Key Critical Factors Of The Users' Awareness Towards Migration Of Accounting Practices

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ABSTRACT

The aim of this research is to identify and propose the key critical factors of the users' awareness towards accrual accounting. Other than that, the relationship between these key critical factors with users' awareness is also highlighted. 240 questionnaires are distributed among three Accountant General's Department (AGDs) within the Eastern Region of Malaysia. Identified key critical factors are categorized into five factors based on the result of Factor Analysis. Then, regression analysis is used to test the relationship. The result shows that the key critical factors consist of internal and external factors, which are top management (organisation), technologies and system, colleague opinion

and self-efficacy for change as well as external issues. Other than that, the results of regression analysis reveal that only top management (organisation) and external issues have a significant positive relationship with users' awareness towards the implementation of accrual accounting. The results could be the baseline to improve national capability and capacity in the implementation of accrual accounting and, consequently, support the Malaysian ETP towards greater accountability and holistic sustainability in the Malaysian economic system.

Keywords: Accrual Accounting, Accountant General's Department (AGD), Eastern Region, Malaysia.

1.0 INTRODUCTION

As mentioned by the Accountant General Department of Malaysia, to become a high-income nation, one of the key priorities and features is to strengthen and reform fiscal discipline. In regard to this goal, the National Economic Advisory Council (NEAC), through New Economic Model (NEM), recommends a new initiative that is to migrate from cash accounting to accrual accounting in the public sector by the year 2015. Accrual accounting is different from cash accounting since cash accounting is seen as cash or its equivalent, either when it is received or paid. Also accrual accounting refers to a method that measures the financial performance and financial position of an entity in recognizing the effects of transactions or events as they occur.

Since to fully migrate to accrual accounting by the year 2015 is a target of the Malaysian government as one of the Policies Measures in the Malaysian Public Sector Transformation Agenda, a comprehensive work plan of accrual accounting of all the public entity is required. Abu Hasan et al. (2013) provide evidence that the most critical factor for successful transitions in order to get new accounting practice is the commitment to change among the public sector accountants. The levels of commitment that can be improved through active promotion of the change programme are: presenting detail action plan, building in risk management, improving on human capital and fulfilling the IT needs. Moreover, Chin (2011) has developed a framework to explain on the key factors that influenced the users' awareness on the transition to accrual accounting. He has listed technologies as an additional key factor besides strategy, process and people, as the key factors in influencing user's awareness on the transition to accrual accounting. Further, Cosmina (2013) who listed culture to change, internal control and executive controls over subordinate as the factors to influence the awareness on transition to accrual accounting.

The Public Sector Committee of New Zealand stated that during the transition process to accrual accounting, the key factors are leaders, accounting staff; accounting systems and technology become the factors which are influencing on the users' awareness (IFAC, 1994). Since the work plan will be implemented in each department, every individual in each department must be a key element throughout the process of transition to

accrual accounting. Therefore, it is important to have government servants who are aware on cost and benefit, and are prepared and interested in participating throughout the process of transition to accrual accounting (IFAC, 1994).

This study proposes five factors covering-both external issues and internal issues that may enrich users' awareness and provide a positive perception on the transition to accrual accounting. They are top management, technologies and system, human behavior (colleague's opinion and self-efficacy), and external issues. According to Accountants Today (2011), the lack of awareness among public servants in Malaysia may bring failure to the process of the migration towards the new accounting basis. This may influence the migration process and bring a huge impact to many parties, such as the citizens, the government, lenders and stakeholders.

There is a lack of research that emphasizes on accrual accounting within the public sector in Malaysia. On one hand, most of the accrual accounting practices are adapted from foreign countries, for example New Zealand, Australia, United Kingdom and Canada (Wayne, 2004). On the other hand, in Malaysia, accrual accounting is still a new concept. Furthermore, only a few researches have been done that emphasize on officers' perception in AGD, Malaysia (Omar et al., 2011; Chong et al., 2011). Therefore, this research fills the gap in the literature this area of research is beneficial and useful for the implementation of accrual accounting in Malaysian public sector.

The contribution of this research is three-fold. Firstly, we present new critical success factors in implementing accrual accounting. As discussed earlier, these critical factors would bring better perception and improve staff's awareness. Secondly, these critical factors focus on the internal and external factors which influence users' awareness. Thirdly, these factors could serve as a new framework for policy makers in order to improve the current action plan.

This paper has 5 sections. In section 2, the researchers review the literature on accrual accounting and users' awareness. In section 3, they describe the methodology used in this research. Section 4 presents the results and findings. And finally, section 5 discusses and concludes the study.

1.1 Objectives Of The Research

The main objective of the study is to examine the significant influence of five key critical factors on the users' awareness in the transition to accrual accounting in Malaysia public sector. The objectives of the study consist of the following:

- i. To examine the significant influence of top management (organisation) on users' awareness in the implementation of accrual accounting.
- ii. To examine the significant influence of technologies and systems on users' awareness in the implementation of accrual accounting.
- iii. To examine the significant influence of colleagues' opinion on users' awareness in the implementation of accrual accounting.

- iv. To examine the significant influence of self-efficacy for change on users' awareness in the implementation of accrual accounting.
- v. To examine the significant influence of external issues on users' awareness in the implementation of accrual accounting.

2.0 LITERATURE REVIEW AND HYPOTHESES TESTING

Awareness on transition to accrual accounting considers the fundamental rule of change and change is needed to improve the current accounting practices in Malaysia. According to Hepworth (2003), the key success for the implementation of a new system strongly depends on understanding and willingness of the individual to support the new changes. Lack of awareness among the public servant becomes the common issues found throughout the world. Similarly, in Malaysia, the lack of awareness among some public servants may create user resistance on the transition to accrual accounting in the public sector (Accountants Today, August, 2011).

Figure 1: Proposed Key Critical Factors



The public servant need to aware on the importance of this transition since accrual accounting implementation was aspired in the New Economy Model (NEM) by the Malaysian government to improve the quality of reported financial information. It is therefore, imperative that strong financial accounting systems and Outcome Based Budgeting are put in place. This is aligned with the foundation of the Economic Transformation Programme (ETP) to become high-income nation, which is formed by strengthening and reforming fiscal discipline with the drive for "People First, Performance Now".

To fill the gaps in the literature, in this research, the key critical factors comprise of (i) top management (organisation), (ii) technologies & system, (iii) human behaviour, which consists of colleagues' opinion and self-efficacy for change as well as (iv) external issues that might influence the users' awareness, as shown in Figure 1.

Top management (organisation) refers to the perceived facilitation provided by the organisation to make users' adaptation to new system-related changes easier. The organisational support will help users to adapt to the new system by providing knowledge and experiences through education and trainings, which will help the public servants to solve problems related to the new system (Young & Jordan, 2008; Martins & Kellermanns, 2004). Amenakis et al. (2007) also noted that top managements need to ensure that their staffs are well-informed about the migration specifically regarding the specific changes which are going to take place, and how the migration affected and benefited

from the migration. This process can be effectively done through information distribution which might affect the staff's opinion and belief. It can be concluded that good top management will give a positive impact in ensuring the successful implementation of the new system in the organisation.

Therefore, the study proposes the following hypothesis:

H1: Top management (organisation) significantly influences users' awareness in the implementation of accrual accounting.

Technology is the modification, usage and knowledge of tools, machines, techniques or systems in order to improve the performance of organisations to achieve certain goals. On the other hand, a system is defined as components or elements, which involves inputs, process and output of information or data. Due to the implementation of accrual accounting, public servants seek to accomplish a few objectives, such as making data available in real time, electronically exchanging information and employing new technologies to keep them familiar with the new system (Basoglu, 2007). However, during the transition process, it is not easy for users to change in order to adopt the new system because they are familiar with the previous system. Users are not aware and not interested to adopt a new system because lack of knowledge about the new system, and they do not have a clear picture of the new system and the system designation may not fit to the organizational culture and social environment (Gonçalves & Sapateiro, 2008). Having friendly system with an ergonomic features and involvement of users during the design phase of

new system perhaps will lessen the problem of user resistance to adopt a new system and will create on the users' awareness of the transition to new system such as accrual accounting. In Malaysia, the new accounting system, 1GFMAS will be used for accrual accounting which is built on a single and centralized database system. Accountant General Department (2013) stated that the potential issue of new system is slow or failure to access due to single integrated centralized environment and the network problem. Abu Hasan (2013) received mixed responses on the ability of the new accounting system to handle many users and information.

Therefore the study proposes the following hypothesis:

H2: Technologies and systems significantly influence users' awareness in the implementation of accrual accounting.

Colleagues' opinion has been considered as a salient social influence that individuals subscribe in their work environment (Lewis et al., 2003). In this research, colleagues' opinion is defined as the perception that colleague's favour of the changes is related to the implementation of a new accounting system. Colleagues' opinion, which is regarded as a way of communication among co-workers, is designed to assist the development of skills. The ability of colleagues to work as a team and sharing opinion with each other can be considered as key factors for the implementation of a new system. When the colleagues are able to work together, it means that they have a good interpersonal skills and interested to participate in the new task assigned (Burke et al., 2001). Colleague's opinion is

important in the implementation of a new system since colleagues will motivate each other in order to get a good cooperation, attend the ideas, and bring out any dispute issues regarding to the task assigned to them (Hauschildt, 2006).

Therefore the study proposes the following hypothesis:

H3: Colleagues' opinion significantly influences users' awareness in the implementation of accrual accounting.

Self-efficacy for change is considered as an internal factor that can enhance feelings of control. Following Bandura (1995), in this research, self-efficacy for change is defined as an individual's confidence in his or her own ability to adapt to the new situation. Tay (2011) mentions that government servants will support the migration from cash accounting to accrual accounting if they have enough resources, skills and knowledge. The main problem is most of public servants would prefer to embrace the traditional way of doing things. Routinely doing the same practices may create a habit, and it becomes the main factor to the users' resistance and awareness to adopt a new system (Aladwani, 2001). Recently, Abu Hasan et al. (2013) found that local agencies at states and districts level may have problems in terms of staff numbers and qualification. However, the initiatives have been taken by the Accountant General Department (AGD) by organizing awareness program, training of Trainers (TOT) program and collaboration with Institut Perakaunan Negara (IPN), professional bodies and local universities to fulfill the needs of accounting staffs. Therefore, self-efficacy is important motivational variable which will determine whether the

user will resist the new system or accept it (Gist, 1989).

Thus, the study proposes the following hypothesis:

H4: Self efficacy for change significantly influences users' awareness in the implementation of accrual accounting.

In this research, external auditors, consultants and external environment play an important role in ensuring the implementation of accrual accounting within the public sector in Malaysia is possible. In Malaysia, budget deficit and increase in public debt need a modification for fiscal management. So, the transition to accrual accounting in the public sector is the best alternative to solve the issues. Additionally, professional accounting bodies might cooperate with the government in order to develop the accounting framework, organize the training program, develop information technology and create the awareness on the benefits of accrual accounting to the user (SAFA, 2006). Supported by Ken Puspanathan, a Board Member of MASB who stated that profession plays an integral role through the transition process. They should have a proactive role in promoting and addressing the issues to the users in order to enhance the awareness among the users (Gomes, 2013).

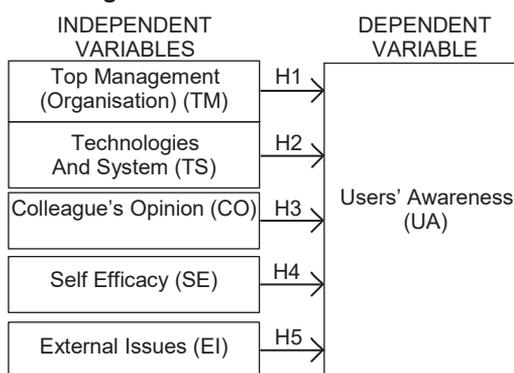
Therefore the study proposes the following hypothesis:

H5: External issues significantly influence users' awareness in the implementation of accrual accounting.

3.0 METHODOLOGY

This research only focuses on direct relationships. The dependent variable is users' awareness (UA) of the implementation of accrual accounting. The independent variables are top management (organisation) (TM), technologies & system (TS), colleagues' opinion (CO), self-efficacy for change (SE) and external issues (EI), as shown in Figure 2.

Figure 2: Theoretical Framework



3.1 Study Design And Participants

From this research, the convenient sample was used which respondents are limited to the accountants from the Accountant General's Department at Eastern Region of Malaysia. The final sample of respondents is as below:

Table 1: Number Of Respondents From The Government Official

State	Population	No. Of Respondents	Completed Questionnaire	Percentage (%)
Terengganu	90	70	67	95.7
Pahang	112	70	61	87.1
Kelantan	100	70	37	52.9
TOTAL	302	240	165	68.75

3.2 The Questionnaire: Construction And Pilot Study

The questionnaire consists of three parts. The first part covers Demographic Data (D), which gathers personal information of the respondents. There are six questions in this part. The second part of the questionnaire comprises of eight general questions to test users' awareness of accrual accounting. In this part, the respondents are instructed to show the extent of their agreement or disagreement using a six-point Likert scale, ranging from 6 for "strongly agree" to 1 for "strongly disagree". The third part of the questionnaire is on the key critical factors. There are 33 questions in this part. The same instruction as part two were used in this part.

The variables and their measurements used in this research are summarised in Table 2.

Table 2: List Of Empirical Variables

Variables	Measures
Dependent variable	
Users' Awareness	Definition, year of implementation, purpose of adoption, New Economic Model (NEM), Outcome Based Budgeting (OBB), "People First, Performance Now"
Independent variables	
Top Management (Organisation)	Top management support, communication, background, training programs and development opportunities
Technologies & System	GFMAS system, accounting software, software configuration, skills
Colleagues' Opinion	Colleagues support, peer support, influence of peer, environment support, colleague opinion

Self-efficacy For Change	Individual knowledge, skill, abilities, resources, work style, understanding
External Issues	External auditor, consultant, external environment, training to preparers and users

4.0 RESULT AND FINDINGS

4.1 Frequency Distribution Of Demographic Variables

For the socio-demographic profiles of the respondents, a total of 71 people (43%) are between 31-40 years old. 128 respondents (77.6%) are female, and the remaining 37 respondents (22.4%) are male; while, 66 respondents (40.0%) have served the government from five to nine years.

Table 3: Socio-Demographic Profile

Profile		Frequency	Percent	Valid Percent	Cumulative Percent
Age	21-30	59	35.8	35.8	35.8
	31-40	71	43.0	43.0	78.8
	41-50	23	13.9	13.9	92.7
	51-60	12	7.3	7.3	100
Gender	Male	37	22.4	22.4	22.4
	Female	128	77.6	77.6	100.0
Year Of services	0-4	44	26.7	26.7	26.7
	5-9	66	40.0	40.0	66.7
	10-14	19	11.5	11.5	78.2
	15-19	13	7.9	7.9	86.1
	20-24	2	1.2	1.2	87.3
	≥ 25	21	12.7	12.7	100.0

4.2 Reliability Test

Reliability and validity testing is established on the contents and wording of the modified

questionnaire. In this research, reliability analysis is carried out to check the consistency and stability of the key critical factors. The reliability range of more than 0.5 is acceptable (Abu Samah, 2012). The closer the Cronbach's Alpha to 1, the higher the internal consistency reliability (Sekaran & Bougie, 2009). The results in Table 4 indicate that Cronbach's Alpha coefficient is above 0.939, which means that the results from the questionnaire is reliable.

Table 4: Reliability Statistic For Five Key Critical Factors

Main Factors	Cronbach's Alpha	Number Of items
Top Management (Organisation)	0.920	7
Technologies & System	0.926	8
Colleagues' Opinion	0.919	5
Self-Efficacy For Change	0.939	8
External Issues	0.924	5

Factor analysis is conducted to explore the underlying factors, which are associated with 33 items. Generally, Kaiser-Meyer-Olkin (KMO) should exceed 0.6 and Bartlett's test significant value should be less or equal to 0.05. The result in Table 5 show KMO of 0.909 and Bartlett test is 0.00. Therefore, these results are highly significant and the factors are suitable for factor analysis.

Table 5: KMO And Bartlett's Test

Kaiser-Meyer-Olkin (KMO) Measure Of Sampling Adequacy		0.909
Bartlett's Test Of Sphericity	Approx. Chi-Square	5372.751
df		528
Sig.		.000

4.3 Hypotheses Testing

4.3.1 Descriptive Statistics

The descriptive statistics of the users' awareness (dependent variable) and five critical factors as the independent variables used in this research are presented in Table 6.

From the results in Table 6, on average, the respondents are aware of accrual accounting since four mid-points are achieved for users' awareness variable. All independent variables, four mid-point values are achieved, which shows that the mean of all the independent variables are at the mid-point value. This shows that significant number of the respondent from the Accountants' General Department agree that they are having a good top management that provide enough information on how the new system will work and its effect on the changes of current system. Besides, the respondents agree that currently, they are using appropriate technologies and system to support transition that able to distribute the accounting information across the department. Furthermore, they have positive interaction and high self-efficacy among colleagues since they have the ability to work as a team and sharing opinion with each other. In addition, the respondents agree that this transitions have an influence from external issues for example from the influence from roles of profession (the role of accountants, auditors, consultant and economist).

4.3.2 Pearson's Correlation Matrix

A correlation coefficient analysis is further performed to examine the relationship between the dependent and independent variables. As illustrated in Table 7, all

Table 6: Descriptive Statistics For Dependent And Independent Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
MeanUA	165	2.38	6.00	5.0359	.57770	-.621	.189	2.204	.376
MeanTM	165	2.57	6.00	4.6861	.73434	-.601	.189	.351	.376
MeanTS	165	2.75	6.00	4.6693	.68257	-.354	.189	.291	.376
MeanCO	165	2.60	6.00	4.7527	.70188	-.229	.189	.178	.376
MeanSE	165	1.00	6.00	4.3794	.83940	-.837	.189	1.844	.376
MeanEI	165	3.00	6.00	4.9903	.68354	-.438	.189	.459	.376

Where: UA is users' awareness, TM is top management (organisation), TS is technologies & system, CO is colleagues' opinion, SE is self-efficacy for change and EI is external issues.

Table 7: The Result of Pearson's Rank Order Correlation Coefficient

	MeanUA	MeanTM	MeanTS	MeanCO	MeanSE	MeanEI
MeanUA	1					
MeanTM	.472**	1				
MeanTS	.377**	.578**	1			
MeanCO	.432**	.516**	.667**	1		
MeanSE	.298**	.442**	.603**	.678**	1	
MeanEI	.586**	.402**	.400**	.534**	.343**	1

** Correlation is significant at the 0.001 level (2-tailed)

Where: UA is users' awareness, TM is top management (organisation), TS is technologies & system, CO is colleagues' opinion, SE is self-efficacy for change and EI are external issues

independent variables have a significant positive relationship with the dependent variable. In another word, all independent variables have a significant positive relationship with each other. Table 7 also shows that the r value is 0.678 (less than 0.9). Jensen (2005) states that, if the correlation coefficients of two variables have an equal to or greater than .90, one of the variables needs to be eliminated. For this research, since the correlation matrix in Table 7 shows that none of the variables are more than .90, it means that multicollinearity's problem does not exist in the data.

4.3.3 Regression Analysis And Interpretation

Table 8 shows that the combination of five key critical factors significantly influences users' awareness. This model is significant with $f(4, 155) = 22.340$ and p-value of less than 0.001. As the p-values are less than 0.05, it means that, at 95% confidence level, there is a significant linear relationship between the five factors and users' awareness. The adjusted r-squared for this model is 0.394, which indicates that 39.4% of the variation in users' awareness is explained by the variation in the internal and external factors, which are top

management (organisation), technologies and system, colleague's opinion and self-efficacy for change and external issues.

From Table 8, only two independent variables are found to have a significant influence on the users' awareness (dependent variables) which are top management and external issues. The t-value for top management (TM) is at 3.351 and p value is 0.001 ($p < 0.05$). The coefficient is positive. There is sufficient evidence to conclude that there is a significant positive relationship between users' awareness (UA) and top management (TM). This means top management support has a positive influence on the users' awareness. Therefore, H1 is accepted.

Table 8: Regression Results

$UA = \alpha + \beta_1 TM + \beta_2 TS + \beta_3 CO + \beta_4 SE + \beta_5 EI + \epsilon$			
	Coeff.	t-ratio	Sig.
Constant		6.293	.000
MTM	.259	3.351	.001*
MTS	.022	.246	.806
MCO	.060	.603	.547
MSE	-.026	-.296	.767
MEI	.449	6.145	.000*
R Square	0.413		
Adjusted R-Square	0.394		
F-Value (Sig. value)	22.340* (0.000)		
N	165		

* Significance at 0.001 level using a two-tailed test.

Similar results are found for external issues. The t-value for external issues (role of ac-

countant, consultant and economic) is at 6.145 and p value is 0.000 ($p < 0.001$). The coefficient is positive. There is sufficient evidence to conclude that there is a significant positive relationship between user awareness (UA) and external issues (EI). Therefore, H5 is accepted.

However, regression analysis shows that there is no significant influence between technologies and system (TS), colleagues' opinion (CO) and self-efficacy for change (SE) on the users' awareness. Therefore, H2, H3 and H4 are rejected.

5.0 DISCUSSION AND CONCLUSION

This study attempts to identify and propose the key critical factors of the users' awareness towards accrual accounting. Other than that, the relationship between key critical factors with users' awareness towards the implementation of accrual accounting in Malaysian public sector is assessed. The results show that top management (organisation) has significant positive relationship with users' awareness in the implementation of accrual accounting. This finding supports the arguments by Martins and Kellermanns (2004), which state that top management needs to be well qualified to understand what public servants need to know in order to implement a new system. Good communication between top management and their staff will enhance the awareness on this migration. If the top management provides full support to their staff, it will help the public servants to be aware of the importance of the migration to accrual accounting.

This study also found that external issues have a positive significant relationship with users' awareness in the implementation of accrual accounting. This means that external issues have significant influence on users' awareness. An example of external issues is the external auditor, who has influence on users' awareness and perception. For example, an external auditor has to ensure that new trainings on accrual accounting are in line with the standards of auditing. The external environment, for example, the global economy system, which affects the Malaysian economy, may influence users' awareness and perception on the rationale of applying accrual accounting. Moreover, consultants also play a vital role in ensuring that accrual accounting is able to be implemented within the public sector in Malaysia (Xu et. al, 2003). The result shows that it is important that professionals such as auditors and consultants can play their roles in order to enhance users' awareness on accrual accounting in the public sector during the transition period.

However, there is no significant influence of technologies & system (TS), colleagues' opinion (CO) and self-efficacy for change (SE) on the user's awareness. The possible reasons of this finding may be due to during the transition process, it is not easy for users to change in order to adopt the new system because they will keep familiar with the previous system. Besides, the respondents have the ability to work as a team however, maybe the accrual accounting is very new to them to attend the ideas and bring out any dispute issues regarding to the task assigned. In addition, there are possibilities of user resist to change since they are routinely

doing the same practices that may create habit rather than learn the new accounting practice.

As a conclusion, the research objectives are achieved since the findings proved that top management and the external issues are the key critical factors of the user's awareness towards migration of accounting practices. The findings are important in order to enhance the user's awareness as well as helping the government to fully adopt the accrual accounting in public sector in the year 2015.

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The Implementation Of Accrual Accounting In The Malaysian Public Sector: Issues And Strategies From The Implementer Point Of View

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ABSTRACT

Like any other reform, implementation of accrual accounting in the public sector will be challenging. To prepare for eventual adoption of accrual accounting, there must be change in management where the structured approach for organization change is supposed to take place. This paper examines the issues and strategies faced by the entity entrusted to be responsible to implement the accrual accounting in the public sector. To advocate the research issue, a qualitative method is utilized whereby data was collected through semi-structured interviews and document reviews. The findings showed that the main challenge faced by the implementer is to equip the employees with sufficient knowledge and skills in handling new sets of accounting systems and information. Besides that, issue in choosing the right accounting evaluation and recognition standards has slowed down the speed of the transition. The preliminary findings also revealed that software customization,

systems familiarization and lack of equipment have hindered the migration process. To resolve these issues, the implementer has utilized several strategies. Training program, systems synchronization, standards harmonization, and engagement with other stakeholders are among the strategies taken in corresponding with the issues raised.

Keywords: Public Sector Accounting, Accrual Accounting, Malaysia

INTRODUCTION

Migration from cash accounting to accrual accounting has been stipulated as one of the policy measures in the New Economic Model (NEM)¹ as a mean to improve decision-making processes and strengthen public finance management of Malaysian public sector (Raja Abdullah, 2010). According to Datuk Wan Selamah, Accountant General of Malaysia, this will put the public sector of Malaysia in line with developed countries. On 11th May 2011, the Prime Minister of Malaysia mandated the implementation of accrual accounting by 2015 (Pasukan Pelaksanaan Perakaunan Akruan [PPPA], 2013a). The implementation of accrual accounting will contribute to a more prudent fiscal management and can enhance the effectiveness of the financial management of the public sector (Accountant General's Department of Malaysia, 2013).

¹ New Economic Model (NEM) outlining strategies to transform Malaysia to become a high-income country. The goal of NEM is for Malaysia to be a developed country, whose people enjoy high quality of life with high level of income resulting from growth that is both inclusive and sustainable by 2020 (National Economic Advisory Council, 2010). To achieve the goals of NEM, there are 8 Strategic Reform Initiatives (SRIs) outlined in the Economic Transformation Programme (ETP) which include strengthening public sector (Raja Abdullah, 2010).

All federal ministries and departments will be moving to accrual in 2015 and will be closely followed by the state governments in 2016 (International Public Sector Accounting Standards Board [IPSASB], 2013). IPSASB has identified four main areas to be focused on for the success of implementation of accrual accounting namely policies and standards, laws and regulations, process and technology and human resources. Subsequently, PricewaterhouseCoopers (PwC) was appointed to be the service provider (SP) for the implementation of accrual accounting activities (PPPA, 2013b).

The scope of services is include data collection for assets and liabilities, preparation of accrual accounting manual, proposed and implement change management plan, and implementation of data collection training and accrual accounting manual training (Accountant General's Department, 2013).

The journey towards accrual accounting has been challenging where commitment, full support and cooperation from everyone is needed to make this transition meet its objectives. Despite all the efforts put in place, the transition of management styles has always cause turbulence within the organization. The turbulence manifested thru internal and external issues that might be hampered the flow of transition. On the one hand, internal issue that rooted within the organization such as low level of employee's knowledge and skills in handling new set of accounting practice has always become a central problem that hinder the process of change. On the other hand, external issue that originated from uncontrollable forces, for instance, changes in international accounting standards and

techniques might pull down the speed of change in implementing new set of accounting practice. Hence, identifying the origin of the issues is crucially important in addressing the exit strategies. Meanwhile, the strategies formed should imperatively justified and appropriately address the issues.

Thus, a preliminary research study had been conducted to identify what are the issues faced by the policy executer in implementing accrual accounting in Malaysia and how the strategies employed able to suppress the emerging issues. This paper reveals the importance of the research context in understanding the issues and strategies of a policy initiative such as this. Implicitly, this paper explores the potential for conflict when management change took place, particularly from the discretion of the implementers in their interpretation of the issues and the strategies taken to counter the issues.

The preliminary findings in this study show that the main issue that disrupted the flow of transition is how the implementer ensures the level of knowledge and skills of the employees are sufficiently equipped to handle the new set of accounting regulation and information. The readiness of accounting information systems applications such as the software customization, systems familiarization and lack of equipment has a significant impact on the systems migration process. Besides that, issue in choosing the right accounting evaluation and recognition standards has slowing down the speed of the transition. To combat these issues, the implementer has prepared various strategies. Such as, training program, systems synchronization, standards harmonization, and engagement with other stakeholders are among the

strategies taken by the implementer in corresponding with the issues raised.

This paper starts with the revision of previous literature reviews about accrual accounting and the issues surround the development and implementation of accrual accounting in several countries. Then follow with findings and discussion and ended with conclusion.

LITERATURE REVIEW

A new concept called New Public Management (NPM) that addresses the needs of efficiency, effectiveness, transparency and accountability of public sector (Pollitt, 1993, cited in Sevic, 2006; Guthrie, 1998; Ron and Mellet, 2003; Nistor et al., 2009) has become a worldwide trend where accrual accounting is one of the reforms (Barton, 2005). One of the reforms under NPM is adoption of accrual accounting which is believed to be able to provide more information for decision makers, lead to a better decision making (Conolly and Hyndman, 2010) and to enhance efficiency, effectiveness, transparency and accountability (Guthrie, 1998; Chan, 2003; Ron and Mellet, 2003; Barton, 2005; Nistor et al., 2009; Monteiro and Gomes, 2013).

The movement from cash accounting to accrual accounting benefits the governments by providing better information such as information on how the resources controlled by an entity, the cost of providing goods and services, enhanced cash flow information and other financial information for assessing financial position of an entity (Arnaboldi and Lapsley, 2009; Lapsley et al., 2009). Relevance financial data which is

not provided by cash accounting provides a better overview of the government's financial activities and financial position (Rowles, 2004; Sevic, 2006; Nesbakk, 2011). Accrual accounting information allows better decision making by ensuring public resources to be used in a more efficient and economically manner and improve communication with stakeholders (Sevic, 2006; Lapsley et al., 2009). Furthermore, accrual accounting information also enhances comparability across government agencies, sectors and countries (Nesbakk, 2011; IFAC, 2014).

Moreover, the pressure to shift from cash accounting to accrual accounting came from the greater demand for accountability in public sector (Chan, 2003). Accountability means answerability (Siddique, 2005). It refers to government officials being held accountable or responsible for their actions and performance for their stewardship of both financial and capital assets (Chan, 2003). Growing public concern over the performance of a government has provided the impetus for a 'clean and efficient' government movement in the early 1980s (Siddique, 2005). Accrual accounting information provides better decision making for public sector agencies because the costs or revenues are better understood. This contributes to more informed policy choices, stronger performance and a more comprehensive basis of accountability (McPhee, 2006).

Over the years, a number of governments have successfully implemented accrual accounting. The earliest countries that had in view of the change were New Zealand and Australia.(Guthrie, 1998; Marti, 2006; Pina and Torres, 2003, cited in Tiron Tudor and Mutiu, 2006; Deaconu, 2010). The shift

from cash accounting to accrual accounting was initially proposed in Australia and New Zealand in 1980s (Funnell and Cooper, 1998; Pallot, 2002, cited in Arnaboldi and Lapsley, 2009). New Zealand became the first country to produce Whole of Government financial statements on a full accrual basis in 1992 (Marti, 2006). New Zealand implemented accrual accounting comprehensively compared to other countries (Tiron Tudor and Mutiu, 2006) and became one of the countries that produce the most extensive set of accrual accounting disclosures (Pina and Torres, 2003, cited in Tiron Tudor and Mutiu, 2006; Nistor et al., 2009).

Soon, this reform was followed by another countries such as United Kingdom, United States of America, Netherlands, Romania, Brazil, Sweden and many more (Saleh & Pendlebury, 2006; Gomes, 2013). Meanwhile, Malaysian government introduced New Economic Model (NEM) in 2010 which outlined the strategies to transform Malaysia to become a developed country and accrual accounting is one of the policy measures to improve decision-making processes and strengthen public finance management of Malaysian public sector (Raja Abdullah, 2010). Malaysia is targeting the adoption of accrual accounting by 1 January 2015 (Gomes, 2013) and will be closely followed by the state governments in 2016 (International Public Sector Accounting Standards Board [IPSASB], 2013).

In United Kingdom (UK), the change to accrual accounting took place in 2001/2002 (Marti, 2006). Accrual accounting and reporting was implemented in UK executive agencies and subsequently become the key element in their budgeting systems (Khan and Meyes, 2009). UK became the

first country to include local authorities and the National Health Service trust in the Whole of Government Accounts (WGA) (Marti, 2006). It was then followed by other governments such as Sweden, Spain, France, Netherlands, Brazil, Romania and many more. Subsequently, the Federal Government of Malaysia is set to adopt full accrual-based accounting for financial reporting by 1 January 2015 (Gomes, 2013).

Besides the benefits gained from implementing accrual accounting in the public sector agencies, the adoption of accrual accounting has always become a debatable subject on what are the real issues that hinder the process of implementing accrual accounting in public sector agencies. One of the major issues is the recognition and valuation of assets and liabilities (Hodges and Mellett, 2003; Chan, 2003; Marti, 2006; Saleh and Pendlebury, 2006; Lapsley et al., 2009). For example, it is hard to identify and measure heritage assets such as monuments and national parks; infrastructure assets such as roads; and military equipments. It is argued that assets such as public monuments should actually be regarded as liabilities because these assets are the subject of cash flows rather than inflows (Robert Mautz, 1988, cited in Lapsley et al., 2009; Monteiro and Gomes, 2013).

Furthermore, there are no agreed standards for recognition and valuation of those assets and liabilities (Tiron Tudor and Mutiu, 2006). However, the UK government has come out with applicable strategy by suggested that the value of the insurance premium on the asset in question to be used. The UK government also solved the issue by determining a nominal value for non-

operating assets that were already owned while evaluating new acquisitions at their purchase price (Diamond, 2006, cited in Monteiro and Gomes, 2013).

The other issue is in regard to the internal issue which is staffing or human competency. Generally, most of employees who were familiar and used to cash basis accounting have a high tendency to resist in practicing a new set of accounting systems (Nistor et al., 2009). Previous studies suggested that a cultural change is a paramount strategy in order to increase the success in implementing accrual accounting (Monteiro and Gomes, 2013). This is noted in Monteiro and Gomez (2013) findings, they have found that among the countries adopted accrual accounting, they are able to accommodate the resistance to change by gradually change the employees' negative perception towards accrual accounting practices.

Moreover, to entice the right attitude of employees' in accepting changes, several others strategies can be put in practices. Among them, re-education and retraining of staff are needed to support the change (Gomes, 2013). Gomes (2013) suggested that by having a better communication and technology like e-learning, it could level up the employees' skills and knowledge about accrual accounting. Consequently, it will be able to reduce the employees' agitation towards embracing new practices and it will increase the level of success of practicing new accounting systems. However, the costs of implementation will be much higher and the efficiency of the new public sector system is still in question (Nistor et al., 2009). The costs and benefits of the change are not necessarily well understood where it can result to an enormous wasted

investment and a risk of losing financial control (Hepworth, 2003; Nesbakk, 2011).

In Malaysian context, the existence of conflicting systems, which is maintaining cash budgeting after the introduction of accrual accounting had caused a compatibility problem between the accounting information and budgetary documents. This is due to the conflicting goals of the accrual and cash regimes (Gomes, 2013; Monteiro and Gomes, 2013). To solve this issue, the Malaysian government has introduced 1GFMAS system in their strategic plan for 2015 accrual accounting implementation. This integrated accounting system will have the capability of maintaining two ledgers, namely, the cash ledger and accrual ledger to keep track of both accrual and cash transactions (Gomes, 2013).

However, the implementation of accrual accounting is not fully commenced yet. Thus, less empirical studies have been done in exploring the subjects related with implementation of accrual accounting in Malaysia. Most of the studies related to accrual accounting in Malaysia focusing on the subject of accounting techniques and standards development issued by Pasukan Pelaksanaan Perakaunan Akruan [PPPA] (see also (Pasukan Pelaksanaan Perakaunan Akruan [PPPA], 2013a)).

Therefore, this research might be able to provide empirical insights in understanding the real issues that related with the implementation of accrual accounting in Malaysia.

METHODOLOGY

In this research, a qualitative approach is considered as an appropriate method to investigate the research issues of this study. The aim for this research is to understand what are the issues faced by the Malaysian government while implementing accrual accounting, and how the strategies employed able to suppress the emerging issues. Thus, the process of “how” is unable to be solved only by searching on the surface, as Gillham (2000) commented, it needs “to get under the skin” of the organization to know what is really happening, and the informal reality which can only perceived from the inside. To view the reality from the inside, the researcher needs to see it from the perspective of those involved.

This approach requires data from various sources such as semi-structured and unstructured interviews, informal conversation, observation, review of internal documents, published reports or statements, and press releases (Yin, 2003). Several data collections strategies such as interviews and documentation reviews have enabled triangulation of the data and this provides a better understanding of the organization as a whole.

To advocate the research issue, Jabatan Akauntan Negara Malaysia (JANM) or General Accountant’s Department was chosen as a subject of study due to its role as the primary government agency that directly involved in the implementation of accrual accounting in Malaysia. In ensuring the implementation process smoothly as it’s planning, JANM has established Accrual Accounting Implementation Team (PPPA) to develop and implement Federal

Government Accrual Accounting System in 2015 (PPPA, 2013a).

Since this research is a preliminary research, only two key officers were interviewed to capture the essential evidence of the main issues. One of them is a Deputy Director of Accountancy Development section at Accounting General Department. Meanwhile, the other interviewee is a Head of Assistant Director of Change Management section. Both of them are the key officers that directly in-charged for the implementation of accrual accounting in Malaysia.

The research used semi-structured interviews since the method give a comprehensive idea or concept about the subject of inquiry. The main reference used to structure the main interview questions are derived from the accrual accounting strategic implementation plan promulgated by the Accounting General Department. The strategic plan was used as a basic instrument in order to validate whether it’s workable or not, and if it was not workable, what are the main issues that hinder the process of executing the plan. The interview was conducted in April 2014 with one to one meeting session and the interview was conducted in English as the main medium of communication. The interview lasted about one to one and a half hours. In analyzing the data, the interview was transcribed and coded into thematic style of analysis.

FINDINGS AND DISCUSSION

From the analysis, two main themes have been identified in explaining the research issues. The issues that related with the

obstacle that hinder the implementation process of accrual accounting is divided into two, the internal issue and external issue. The internal issues are originated from what is happening within the organization. Contrary, the external issues are resembled from any related forces that occurred beyond the control of the organization. This finding section starts with discussing the internal and external issues that caused the government problems in implementing their plans. Subsequently, the issues discussed are espoused with the explanation of what are the strategies deployed by the government in solving the issues raised.

The issues and strategies in implementing accrual accounting

Issues and challenges are inevitable wherever change is instituted (Gomes, 2013). Despite the fact that many countries have moved to accrual accounting, objections and arguments continued to be raised by critics. One of the issues is accrual accounting is difficult to implement especially when bottom up approach is taken as it is difficult to push the political master from below (Ouda, 2013). According to Deputy Director of Accountancy Development Section, Accountant General's Department (AGD), the recommendation of accrual accounting to be implemented in Malaysia has been proposed around 20 years ago but the attempts failed. The implementation of accrual accounting was made possible by the support from the Prime Minister of Malaysia after he announced the NEM (Raja Abdullah, 2010). This is supported by the Deputy Director of Accountancy Development Section, AGD as following comment:

We have been trying to implement accrual accounting earlier on but it has not been successful in the sense that earlier on, we tried to bottom up the policy. From below, we have to push the political master which is very difficult. In fact, twice attempts were made. The first attempt was around 20 years ago, especially after New Zealand and Australia who had already implemented accrual accounting. There was an initiative where we visited all these countries who have implemented accrual accounting to explore the possibilities whether it is possible to implement it in Malaysia. The initiative was not successful. So, this would be the third attempt and it is successful in the sense that the policy is from the top down. The top down approach is easier where you do not have to convince them already.

Moreover, one of the major issues being discussed is the standards and procedures of valuation and recognition of assets (Mellett, 1997; Chan, 2003; Marti, 2006; Saleh and Pendlebury, 2006; Lapsley et al., 2009; Monteiro and Gomes, 2013). It is difficult to identify and value heritage assets such as art and museum collections, public monuments, and national parks where the acquisition cost of these assets is unknown (Saleh and Pendlebury, 2006; Lapsley et al., 2009). Malaysia is no exception to this where it is supported by the Deputy Director of Accountancy Development Section, AGD, as the following:

One thing is the difficulty of the records and cost information. A lot of

assets don't have cost information. For lands and buildings, we will send it to the Valuation and Property Services Department for valuation.

In addition, there is no universally agreed approach on valuation of assets (Tiron Tudor and Mutiu, 2006). As a result, governments need to develop their own standards in those areas. Malaysia has also made a modification of international standards so it can be fitted and relevance with the Malaysian context, as mentioned below:

We are following International Public Sector Accounting Standard (IPSAS). There are 32 of them. Out of 32, we are going to adopt 30 standards and it will be converted as Malaysian Public Sector Accounting Standards (MPSAS). All of this IPSAS, if there is anything that we cannot follow, we will amend it. We got the approval from the IPSAS Board.

(Deputy Director of Accountancy
Development Section, AGD)

Another challenge in implementation of accrual accounting is the employees (Guthrie, 1998; Gomes, 2013). A cultural change of the employees is needed to ensure success in transition to accrual accounting (Monteiro & Gomes, 2013). All employees who need to move from cash accounting to accrual accounting may resist to change (Nistor et al., 2009); especially senior employees. As per Malaysia experienced;

We already experienced resistance of change especially from senior staff in state level when we implemented Government Financial Management and Accounting System (GFMAS)

(Head of Assistant Director of Change
Management Section, AGD)

Furthermore, the agitation towards the new system also poses a challenge for the conversion to accrual accounting. This statement is further explained by the Head of Assistant Director of Change Management Section, AGD with the following comment:

The employees are apprehensive of this change, but we are trying to emphasize that this is not a significant change. They are more concerned with the issues that will directly affect themselves such as if their workloads will increase and if the new system is difficult to use and many more.

Overall, there are some concerns raised by the employees such as how the new system will affect them and how will the new system works. To make the conversion smoother, Innovation Associates Group System Integrator has been appointed to develop 1Government Financial Management Accounting System (1GFMAS) (PPPA, 2013b) where they are making the new system more user-friendly, as illustrated in the following comment:

*As told by the system integrator/
system developer, the new system*

will be made similar to the current system to make the end users feel more familiar with the modules in SAP. The new system interface will be similar with the current system interface.

(Head of Assistant Director of Change Management Section, AGD)

Subsequently, the Deputy Director of Accountancy Development Section, AGD mentioned that the level of knowledge and skills of the employees also plays a significant role in ensuring the success of accrual accounting implementation. This poses a threat where the employees need to know the basic of the accrual accounting and the new system. To reduce this threat, training programmes have been conducted to help the employees for this transition (AGD, 2014). Few workshops such as IPSAS workshops and MPSAS workshops have been conducted to facilitate learning along with user training on the system (PPPA, 2013). System training consists of training of trainers (TOT) and end user training (EUT) (PPPA, 2013). 1,000 trainers are appointed to be trained under TOT programme where it will be conducted in phases and hands-on training. This is further elaborated by the Head of Assistant Director of Change Management Section, AGD:

We will split the modules. For example, 300 trainers will concentrate on finance and controlling (FICO) module, another 300 trainers will focus on material management module and the remaining trainers will focus on human capital management (HCM) module. They won't be trained on all modules...

It is a challenge to train the trainers. However, it will be a bigger challenge for the trainers to train the end users as this is something new for them. Because of that, we are trying to minimize the chain management. As I mentioned earlier, we will not teach them all modules in the system.

Thus, the 1,000 trainers will then need to train the end users under EUT programme which is expected to be conducted in August 2014 and expected to be finished by early December. In addition, AGD has engaged the Institut Tadbiran Awam Negara (INTAN) (National Institute of Public Administration) to give an online IPSAS course to enable public sector employees to attend the course online. Apart from that, to reduce the worries of the employees, it is important to address the target group carefully where training syllabus must be appropriate and effective. Through dialogue sessions conducted by AGD, concerns raised by employees are gathered to facilitate the delivery of the system, as explained by the Head of Assistant Director of Change Management Section, AGD in the following comment:

Apart from doing surveys, we have conducted dialogue sessions where we asked every ministry to send a representative from responsibility centers to discuss what are the problems or their concerns towards this change. One of the concerns raised by them was training. As our system is still in development phase, we cannot conduct the training yet.

Above all, the readiness of the employees is crucial for this reform to be a success. Their attitude and willingness towards the change are important as stated by the Deputy Director of Accountancy Development Section, AGD:

The second important thing is the readiness of the staff. Attitude of the staff and the willingness of them to move are very important. If they have the knowledge but do not want to accept the change, it will cause a big problem.

As a mean to increase the readiness of the staff, awareness programmes were carried out since 2011 to encourage the public sector employees to gain a better understanding on accrual accounting and the new system, 1GFMAS. This is elaborated by the Head of Assistant Director of Change Management Section, AGD in the following comment:

The awareness programme for introduction of accrual accounting has started back in 2011. The trainers involved were around 100 trainers...

Awareness programmes have been conducted to instill a better understanding of accrual accounting where meetings with the 1,000 trainers will be conducted around the country starting on the 21st of April. We have 10 series where they will be brief on the overview of 1GFMAS. We will give them information on the current processes and future processes. This is a very important part. For example, we will tell them the procedure to release

a voucher with the current system and compare it with the procedure in the new system later.

Apart from that, the issue of readiness also extends to the stakeholders. Their readiness also plays an important role where stakeholders such as the auditors will involve directly with the change from cash accounting to accrual accounting (Blondal, 2003). If the auditors are not ready, they will not be able to catch up and thus, hinder the success of the accrual accounting implementation. Hence, an agreement between the implementer and the auditors are achieved as commented by the Deputy of Accountancy Development Section, AGD:

Definitely we have a session with National Audit Department (NAD) and we get them involved in setting the accounting standards like determining the opening balance of assets and liabilities. We make sure that they agree to our matter, transitional approach. We are not going to take in all assets and liabilities in one go. This is the approach engagement with the auditors and it is one of the critical success methods.

Additionally, another challenge in the adoption of accrual accounting is system or technology (Guthrie, 1998; Blondal, 2003). The major problem associated with system or technology is time constraint. In order for the implementation of accrual accounting to take place, the new system based on accrual basis should be completed to facilitate the transition and hence, the training can be conducted. This is both supported by the following comments:

The new accrue based system is called 1GFMAS. We outsourced to Innovation Associates Group System Integrator (IA) to develop the new system. They are our system integrator (SI). The system is in the midst of development, which is a bit delayed. We are hoping we can catch up.

(Deputy Director of Accountancy
Development Section, AGD)

We are taking a big bang approach. We know that we have time constraint where we only have around 4 to 5 more months to conduct the training. We were hoping to finish the training before December as December is a peak period. However during the meeting yesterday, we can only finish the training by 5 December.

(Head of Assistant Director of Change
Management Section, AGD)

Next, there is also a challenge to obtain training facilities such as computer labs. Since the training will be conducted in classes, computers are needed where the trainers will be able to have direct practical experience in operating the new system. Apart from that, there are concerns about the security of the system. The main criticism of cash accounting is it can easily be manipulated whereby, this criticism can also be pointed to accrual accounting where it offers a greater scope for manipulation (Hepworth, 2003; Nesbakk, 2011; Monteiro & Gomes, 2013). To reduce this threat, 1GFMAS is designed with controls such as further explained in the following comments:

Data manipulation is not just an issue that affects accrual system, but it also affects cash system. However, there is system log and audit trail for the new system. If you enter the system, it will be recorded in the system log. There is authorization control. Hence, with the existence of audit trail, it should minimize the threat of manipulation.

(Deputy Director of Accountancy
Development Section, AGD)

Anything can be traced in the system since we are using user ID. For example, we can even trace which employees who printed out reports through audit trail.

(Head of Assistant Director of Change
Management Section, AGD)

Finally, there are some issues with customization of modules and consolidation. 1GFMAS is using the standard SAP but some of the modules are customized. Modification and customization of modules will take time as mentioned by the Head of Assistant Director of Change Management Section, AGD. As for now, Malaysian government is using different accounting system such as Government Financial Management Accounting System (GFMAS) and Budget Planning and Control System Electronic or familiarly known as Sistem Perancangan dan Kawalan Belanjawan Elektronik (eSPKB) (PPPA, 2013) which is difficult to consolidate. As a result, to make consolidation easier, 1GFMAS will be used by every department and responsibility

centers, as explained by the Head of Assistant Director of Change Management Section, AGD:

Now our accounting offices are using GFMAS while responsibilities centers are using eSPKB. We will use 1GFMAS as we want to make it centralized with one data management system for all.

SUMMARY AND CONCLUSION

To conclude, it is undeniable that the adoption of accrual accounting possesses some issues and challenges in implementing it to the public sector. In this research, the researcher assumes that there are internal and external issues that hinder the process of implementing accrual accounting in Malaysia. Initially, the international accounting standard setting has been identified as an external issue that might slow down the process of the implementation. However, the findings show that there is no interruption of international accounting standards setting in Malaysia case and this problem is actually internal related issue which is not derived from the external forces. The modification of the original standards is made by followed the guidelines provided by the IPSAS. Thus, this modification is permitted by the IPSAS itself and the problem is how well the regulator molds the standards that fitted with the local context.

Furthermore, this study can provide valuable insights to the governmental agencies in indentifying the potential issues related with the implementation of accrual accounting at the agency level. In addition, if the agency

faced the similar issues, the strategies discussed in this research are able to provide potential solutions for them in future. In better off this research in future, a similar research approach can be undertaken by adding other governmental agencies as case subjects. By doing so, the findings generated from the various governmental agencies will be able to provide a substantial explanation and wide-range of discussions about the implementation of accrual accounting in the public sectors. Thus, the adoption to accrual accounting will be a long challenge and it needs support from everyone to make it as a success with the hope for Malaysia to be one of the developed countries by 2020.

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The Expectation Of Accountant General's Department Of Malaysia Towards Future Accountants' Skills

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ABSTRACT

Nowadays, employers are expecting capable and competent graduates to be hired in fulfilling organizations' goals and objectives. Same goes to public sector organization as facing by Accountant General's Department of Malaysia (AG) in ensuring their future accountants acquired both soft skills and hard skills. Today, future public sector accountants will face more challenging working style since they are being needed to be more effective in enhancing governance, accrual accounting, reporting, auditing and overall accounting practices. Thus, the important of skills and knowledge being needed has been explored and discussed in this current research particularly from the perspective of public sector. In this research, five important skills have been identified to be important for future accountants in order to be employable. The skills are team work, time management, problem solving, communication and knowledge in accounting theory and practice. Furthermore, most employees from AG was expected that future

accountants must be able to work in group, competent to organize workload in meeting deadlines, able to integrate multidisciplinary knowledge to solve problems, proficient to listen and understand information and able to use data, evaluate risks in solving a real world problems. The findings can assist AG in enhancing and improving the competency of junior and future accountants in early stage of being part of AG through internal or external training. Besides that, the important of every skills perceived by employers can facilitate the future accountants to be prepared prior joining AG as public accountants in any of AG unit.

Keywords: Accountant General's Department (AG), skills, team work, time management, problem solving, communication, knowledge in accounting theory and practice, accountants.

INTRODUCTION

Background Of The Study

Soft skills is a sociological term relating to a person's "EQ (Emotional Intelligence Quotient), the cluster of personality traits, social graces, communication, language, personal habits, and optimism that characterize relationship with other people. Soft skills complement hard skills, which are the technical requirements of a job" (Schulz, 2008).

Hard skills normally refer to technical procedures or practical tasks that are typically easy to observe, quantify, and measure. The items under hard skills is related to the pursuit of knowledge and formal education (Nikitina, and Furuoka, 2011).

The fundamental requirement for job applications not only in private sectors but also in the public sectors that require the applicants to have soft skills to become more successful in organizations. With the rapid increase in globalization trends and innovations in information technology, it becomes necessary for a business graduates, specially accounting graduates, to survive in the global market environment (Mohamed, & Lashine, 2003). Many firms have begun to recognize the relationship between employees' soft skills and the overall success of the organizations (Dixon, Belnap, Albrecht, & Lee, 2010). State Labour Department Deputy Director of Malaysia in The Star Online has mentioned that potential employers demanded soft skills like communication and work competency besides being knowledgeable for the fresh graduates (Chan, 15th May 2011). Previous Higher Education Minister Datuk Seri Mohamed Khaled Nordin has mentioned in Bernama that employers were no longer looking for graduates aimed only with good grades, but were seeking those with effective soft skills such as the ability to communicate well and work in a team (Bernama, 8th April 2011). He also mentioned that companies or employers did not necessarily hire graduates who passed with flying colors, adding those with average academic qualification but better soft skills had a better chance of being hired and failure to possess soft skills would affect their chances in securing jobs after completing their studies (Bernama, 8th April 2011). Basic technical skills are often absent and continuing professional development and supports are often not well developed.

Soft skills are important for employability due to the emergence of the knowledge based on economy and proliferation of high

performance in the organizations (Ranjit, 2009). Lacking of soft skills can be lead to unemployment. Having knowledge without soft skills is an obstacle for fresh graduates in job hunting (Chan, 15th May 2011). The former Higher Education Minister Datuk Mustapa Mohamed has mentioned in Bernama that employers in the country said that many university graduates were unemployable because they have no soft skills (Bernama, 14th July 2007).

Employers were no longer looking for graduates only with good grades, but were seeking those with effective soft skills such as the ability to communicate well and work in a team. The main role played by universities was to impart knowledge and it was up to undergraduates to acquire the soft skills. Employers did not necessarily hire graduates who passed with flying colors, adding those with average academic qualification but better soft skills had a better chance of being hired said by Datuk Seri Khaled Nordin (The Star Online, 7th March 2010).

According to the ACCA Report (2010), public sector bodies do not always appreciate the difference between professional and academic qualifications, and as a result a professional qualified accountant is not given appropriate recognition in the salary and benefits system and is therefore less likely to stay within the public sector. Developing accountants for the future requires a concerted and sustained effort by employers, donors and professional bodies to work in partnership to build structures and professional accountancy capacity.

The Accountant General's Department is selected in this research since public sectors

is in progressing to switch their systems to accrual accounting, a model widely used in the private sector. In report done by ACCA (2004) have mentioned that "In year 2000, Malaysia and Tanzania were the only non-OECD countries that were planning to adopt the accrual basis for their central government accounts" (Wynne, 2004) thus need to improve accountants' knowledge and skills. The move to accrual based accounting is part of the process of adopting private-sector-style financial statements for the public sector (Wynne, 2004). In addition, the influence of accounting professions in the development of governmental accounting towards accrual-based has been seen in countries such as the USA and UK. These countries were classified in the same category as Malaysia, both have already adopted accrual accounting for their government accounting and reporting. Accruals accounting is, however, complex and requires more resources both financial and people to operate and many of the necessary skills are still being developed in departments (Wynne, 2004). A wide range of benefits are often claimed to arise from making this fundamental change to financial accounting in the public sector. These include improved accountability, management of assets and generally increased efficiency (Wynne, 2004). Hence, there is a possibility for Malaysian governmental accounting to further develop towards accrual accounting (Zakiah, 2007). The important of skills development was believed to be crucial matters in shifting to accrual accounting methods. Thus, current researchers believed that more research should be done in order to find the dominant or leading skills for future public sector accountants.

The Reason Of The Importance Of Skills For Public Sector Accounting

Based on the ACCA Report (2010), the challenges in improving financial qualifications are a priority for public sector organizations. It is generally resource intensive and a balance has to be struck between funding targeted curriculum development and building capacity within the profession. Equal attention has to be given to developing the accounting technician qualification together with professional qualifications.

Furthermore, the challenges on developing skills that fulfill the job requirement are an acute shortage of qualified finance professionals working within the public sector in developing and emerging economies (ACCA Report, 2010). Basic technical skills are often absent and continuing professional development and supports are often not well developed. Students have reported that they were unsupported, as employers had no formal training structure and very few resources (ACCA Report, 2010).

According to the ACCA Report (2010), qualified accountants working within business will also have a key role to play in putting together and presenting the business case for funding in order to persuade potential investors to provide their support. This will require a combination of technical expertise as well as analytical ability and sound communication skills. In Malaysia, most CFOs, partners and senior accountants expect many skills to be more in demand, including strategic scenario planning, intellectual capital accounting/management, enterprise risk management, improving the use of data and knowledge, building relationships in the business and

with other stakeholders, project modeling/ costing and analytical thinking/ analysis/ including fair value expertise. The majority of CFOs, partners and senior accountants would expect demand for qualified accountants to increase. Increased demand is expected for a variety of reasons, including the need for effective risk management, tighter reporting and other regulations, the adoption of International Financial Reporting Standards (IFRS)/ the International Public Sector Accounting Standards Board (IPSAS) and anticipated economic growth. Qualified accountants need analytical ability and an understanding of the interconnectedness of risk across complicated entities. They also need the ability to communicate with peers and external stakeholders so that they can understand the future vision for the business, as well as clearly understand its past performance. Business success depends on the ability to make sound decisions in a risky, uncertain world. Qualified accountants can help management teams to make those decisions, based on information drawn from accurate data and informed by broad business knowledge.

Problem Statement

For this current research, researchers focused on the Public Sector Accountants. The reason in focusing into accountants in Accountant General's Department (AG) is because accountants need to be accomplished with skills since the public sector is in the stage of preparation in moving to accrual accounting. The accountants must be skillful in order for them to enhance the effectiveness of financial management among the public sector. This is because many fresh graduates face unemployment blues today because they lack of soft skills (Chan, 15th May 2011). According to the

former Minister of Higher Education, Datuk Mustapa Mohamed which mentioned that university graduates are unemployed due to lack of soft skills. He also said that, graduates should enhance their employability by being global minded, able to work in a team, has excellent communication skills, active and able to make friends easily (Bernama, 14th July 2007). With the move from GAAP (General Accepted Accounting Principles) to IFRS (International Financial Reporting Standard) and International Public Sector Accounting Standards (IPSAS), there is an increase need for accountants with strong soft skills because of IFRS's requirement to apply principles rather than comply with rules (Kermis & Kermis, 2011). Failure to demonstrate the types of soft skills required for a job performance will negatively affect the reputation of the company (Norazila, 2010). In recent research done by Finch, Hamilton, Baldwin and Zehner (2013) also focused on which skills that importance perceived by organizations and they found that highest importance on soft skills and lower importance on academic reputation. They believed that more attention need to be provided to soft skills and problem solving skill. Therefore, in this current research, the aim is to study the most important skills among the potential accountants in the public sector instead of private sector.

Research Question

In order to find the answer to the problem, the research question is:

RQ1. What are the most important soft skills needed for public sector accountants in Accountant General's Departments (AG)?

Research Objective

The research objective is:

RO1. To identify the most important skill needed for public sector accountants in Accountant General's Departments (AG).

Significance Of The Study

The significant from this research is to improve and develop soft skills among potential accountants especially in Accountant General's Department, to enhance the employability skills among accountants in AG and to provide information on the importance and required soft skills that give positive impact on employability.

experience and did not having sufficient knowledge and competency (Cruetz, September 2005, Ranjit, 2009, Ji, ,July 2013)

Universities should accordingly incorporate the market expectations to their accounting programs in order to ensure that accounting graduates are equipped with knowledge and skills required by the market and ready for the workplace. However, there are increasing criticisms that accounting education has lagged behind developments in the changing business environment (Albrecht & Sacks, 2000; Carr, Chua & Perera, 2006; Courtis & Zaid, 2002; Evans et al, 2010; Hancock, Howieson, Kavanagh, Kent, Tempone & Segal, 2009; Hancock, Howieson, Kavanagh, Kent, Tempone, Segal & Freeman, 2009; Jackling & De Lange, 2009; Kavanagh & Drennan, 2008; Mohamed & Lashine, 2003; Pan & Perera, 2011).

LITERATURE REVIEW

Previous Research

The core components of lifelong employability agenda is to improve the soft skills in Malaysian graduates. Based on Ranjit, S. (2009), the most common approaches to developing skills for Malaysian graduates is starting from their learning period in higher education institutions.

There has been an increasing demand from Malaysian employers that higher education institutions produce "work-ready" graduates with adequate soft skills. Employers worldwide want well-rounded graduates who possess discipline-specific knowledge and skills (hard skills), desired soft skills, and preferably, relevant work experience (typically attained through internship or part time jobs). The lack of soft skills has contributed greatly to graduate unemployment, besides factors such as low proficiency in English, lack of relevance of university major jobs available, lack of work

In a Survey on Employability of Graduates conducted by Bank Negara Malaysia in July 2002, the most widely reported soft skills deficiencies were in communication, action-initiating abilities and problem solving skills. The respondents of the surveyed indicated that graduates did not have the required skills to function effectively at the workplace (Ranjit, 2009). Another research which found that a number of CFOs comment that accounting staff in particular tend to focus on the 'hard' technical aspects of their jobs rather than on honing the soft skills required for professional success and value creation for the business overall (Grant Thornton, 2011). In research done by Hassall, et.al. (2003) which focused into technical skills rather than vocational skills. As mentioned by Chartered Management Accountants

(CMA), technical skills are the most required by which they found ten most important skills needed by CMA.

The literature will continue to discuss only five skills and employability which believed to be important to future accountants and graduates. This is because based on the best knowledge of current researchers from previous researches such as Hassall, et.al., (2003), Dixon, Belnap, Albrecht, & Lee, (2010), Norazila Azli, (2010) and Kermis & Kermis (2011), the five skills are most common to be important in their research.

Communication Skills

Communication skills is the ability to effectively communicate in common global languages, negotiation skills, working in team environments using new communication technologies has become a necessity (Mohamed & Lashine, 2003).

Communication is a two-way process in which an exchange of thoughts, feelings, or ideas taken place. An effective communicator can coordinates and deliver information in a timely matter. After the message has been communicated, the individual should verify the information to ensure that the receiver has understood the desired message (Dixon, Belnap, Albrecht, & Lee, 2010).

Communication skills are important in the accounting profession. Communication skills are valued highly with professional accounting firms and demonstrate that accounting professionals need greater preparation to be more effective communicators (Stowers & White, 1997). Oral and written communication skills are the most important employee characteristic for any job, not just those in public accounting

(Dennis & Pamela, 2009). Previous research done Hassall, et.al. (2003) also believed that communication skills was the most important skill for management accountants. In research done by Finch, Hamilton, Baldwin and Zehner (2013), they found that organizations also perceived that new graduates which possessed soft skills on effective communication and interpersonal skill will be more competitive in the market place. Thus, researchers believed that communication skills will be one of the importance skills should be improved for new undergraduates.

Problem Solving Skills

According to Mohamed & Lashine, (2003) an accounting graduate should have the ability to collect the right information, analyze the business problems using logical reasoning and apply the problem solving methodologies to real world business problems.

Based on the previous research by Dixon, Belnap, Albrecht, & Lee, (2010) has been suggested that great problem solvers are purposes-driven and future minded. Most individuals endure difficult problems because they understand that what they are doing is making a difference, and the result is worth the struggle. In the other words, we should take a step back to consider all options and utilize creative thinking. A purpose-driven individual will never lose sight of the goal at hand.

In a study conducted by the Institute of Labor Studies, it was discovered that problem solving was the second most desirable soft skills sought after by managers (Dixon, Belnap, Albrecht, & Lee, 2010). Employers in research done by Hassall, et.al. (2003)

also found that problem skill is also one of important skill needed by management accountant same as research done by Finch, Hamilton, Baldwin and Zehner (2013) which has been identified by employers as one of important factor for evaluate the new graduates' employability.

Knowledge Of Accounting Theory And Practice

According to Ahadiat and Smith, (1994) noticed that knowledge of accounting theory and practice considered importance to accounting firms. The empirical research by Novin and Tucker (1993) showed that, respondent rate the financial accounting, taxation, auditing and accounting information system as a top ten responses to 'needs additional education'. These findings indicate that public accountants, not just want the increase in communication skills, but they also want to possess knowledge of accounting theory and practices. Cornell and Arora (1998) in their research found that knowledge of accounting is the third important skill for accountants. In recent study done on 20th century by Grant Thornton. (Summer 2010), they found that lacking of knowledge and technical accounting skills as their second-most concern for non-US company.

Teamwork Skills

Based on previous research by Norazila Azli, (2010) all teams need members who believe in team goals and are motivated to work with others actively to accomplish important task, whether those tasks involve recommending things, making or doing things, or running things. Teamwork is becoming more commonly used and widely accepted as way increase productivity in the workplace. Another essential teamwork

is the ability and desire to commit to a shared team goal. All other teamwork skill are useless without a commitment to the work. With this commitment to the team, members should be willing to take on any role necessary to accomplish the required tasks, whether it is a leadership role or a subordinate role.

Time Management Skills

Individual productivity is a function of the ability to manage commitments within the time available (Kermis & Kermis, 2011). Employers in research done by Hassall, et.al. (2003) also found that time management skill is also one of important skill needed by management accountant.

Employability

According to Lowden, Hall, Elliot & Lewin (2011), there are a lot of research done on graduate employability which produced the breakdown of skills, for examples; key skills, common skills, transferable skills, essential skills, functional skills, skills for life, generic skills and enterprise skills. Yorke & Knight (2006) cited in Lowden, Hall, Elliot & Lewin (2011) has defined that "[Employability is] a set of achievements, skills, understandings and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy". Nowadays, to be employable, future graduates must possessed and have necessary skills that are demanded by the employers.

RESEARCH METHODOLOGY

Based on the research objectives which is to study the most important skills among

potential accountants in the Accountant General's Department of Malaysia and to find which skill elements that are requires among accountants in the AG in order to be employable in the future.

Population And Sample

The targeted population is current employees based on their experiences in Accountant General's Department of Malaysia. Current researchers have send a letter of permission to distribute a set of questionnaire to employees that willingly to answer. In this research, it will use the Cluster Sampling based on nine departments. Cluster samples are samples gathered in groups or chunks of elements that, ideally, are natural aggregates in the population. The targeted population is first divided into clusters (Sekaran & Bougie, 2010). Once the data has collected, it will be randomly selected to be analyzed. The targeted group will be based on the nine departments under the Accountant General's Department. A total of 270 questionnaires have been distributed in Accountant General's Department which 30 questionnaires is segregated into each department. The sample size is 159 samples based on Sekaran, and Bougie, (2010). Thus, it shows that the response rate in this current research is only 58.89%.

Respondents' Profile

Table 1: Respondents' Profile

Gender	Percent
Male	30.2
Female	69.8
Age	
Less than 20	.8
21-30	48.1
31-40	36.4

41-50	9.3
More than 50	5.4
Race	
Malay	89.9
Chinese	5.4
Indian	3.9
Others	.8
Education	
SPM/STPM	17.8
Diploma	27.1
Degree	50.4
Master	3.9
Professional Certificate	.8
Position	
Deputy Director	1.6
Chief Of Assistant Director	2.3
Assistant Director	12.4
Accountant	17.8
Chief Of Administrative Assistant	3.1
Finance Assistant Officer	3.1
Assistant Senior Accountant	5.4
Information System Officer	3.1
Assistant Officer Information Technology	2.3
Assistant Data Processing	.8
Assistant Operator for Data Processing	.8
Administrative Officer	4.7
Account Assistant	14.0
Account Clerk	9.3
Chief Senior Assistant Director	.8
Personal Assistant	3.9
Other	14.7

It was found that 30.2% respondent were male and 69.8% female. The respondent comprised in the age of group of less than 20 years, 21-30, 31-40, 41-50, and more than 50. It shows that the highest

percentage of respondent ages is 48.1% which is from group of age range from 21-30 years old, while the lowest is 0.8% which is from group of less than 20 years old. From the above frequency, data shows that most of the respondents were Malays which is 89.9% (116) and the least were others were 0.8% (1). Respondent of Degree holders scores the highest frequency 65(50.4%) and followed up by the Diploma holders 35 (27.1%), SPM/STPM holders 23 (17.8%), Master holders 5(3.9%) and Professional Certificate 1 (0.8%). The respondent who responses the most are in the Accountant position which is 17.8% (23) and the least to respond are the Chief Senior, Data Processor Operator and Assistant Operator which equally scores 0.8% (1) compare to the others.

Instruments

The instrument is used to gather the information on the importance of skills in order to be employable. The first section of the questionnaire gathers the information of the respondent's personal data. The second section contained the types of soft skills based on the questions.

Questionnaires Development

Table 2: Instruments

Variable	Sources
Communication Skills	Trevor Hassall, John Joyce, Jose Luis Arquero Montano & Jose Antonio Donoso Anes (2003) and Norazila Azli (2010)
Problem Solving	
Knowledge Of Accounting Theory And Practices	
Team Work	
Time Management	

RESULTS

Reliability Analysis

Table 3: Reliability Analysis

Variable	Cronbach Alpha
Communication Skills	0.911
Problem Solving	0.956
Knowledge Of Accounting Theory And Practice	0.921
Team Work	0.948
Time Management	0.894
Employability	0.879

Based on the results shown above, the Cronbach's Alpha for the overall scale for the 5 main variables are explained well. According to Uma Sekaran and Roger Bougie (2010), the closer Cronbach's Alpha is to 1, the higher the internal consistency reliability. In general, reliabilities less than 0.70 are considered to be poor, those in the 0.80 range, acceptable and those over 0.90 good. The most reliable and consistent factors are problem solving (0.956), team work (0.948), knowledge of accounting theory and practice (0.921) and communication skills (0.911). For time management and employability, the factors are acceptable since the reliability is in between the 0.8 range.

Communication Skills

This result shows that from the respondents' point of view, the communication skills are rank as important because when future accountants acquired communication skills, it will help them to understand information. Besides that, it will help them to listen and speak in effective manner and communicate idea consistently. From this result, employers in AG perceived that

listen, speak and communicate effectively has been ranked as the most important aspect in communication skills. In addition this result is supported by Cornell & Raj Arora (1998) who reveals that interpersonal/communications skills are by far are the most important skills in selecting a candidates for accounting staff position. Furthermore, most of the respondents preferred to write and speak well in Bahasa Melayu (Norazila, 2010). Moreover, based on the previous research done by Hassall, et.al. (2003), it can be seen that the employers placed an emphasised on communication skills.

Problem Solving Skills

Researchers have found that the majority of the respondents have agreed that future accountants with this skills, it will help them to identify and analyses any problems creatively and innovative. Employers from AG have agreed that the most important part in problem skills is need to integrate all knowledge from multidiscipline for the purpose of problem solving and for applying in appropriate solution. This result is also can be supported by previous research done by Norazila (2010), where most of the respondents preferred on decision making, analyses cost problem and choose solution problem rather than apply creative and innovative thinking. In addition, based on the study conducted by Hassall, et.al. (2003), employers have agreed that one of the important skills for management accountant is problem solving skills.

Knowledge of Accounting Theory and Practice

Knowledge of accounting theory and practice comprises the accounting, auditing and taxation. Therefore, the result shows that from the respondents' view, the knowledge

Table 4: Percentage For The Importance Of Communication Skills

Communication Skills	Considered Important	Considered Unimportant	Rank
1. Present and defend points of view and outcome of their own work, in writing to colleagues, clients and superiors.	89.1%	10.9%	
2. Present and defend points of view and outcome of their own work, verbally to colleagues, clients and superiors.	85.3%	14.7%	
3. Use visual aids in presentation	85.3%	14.7%	
4. Listen effectively to gain information and to understand opposing points of view.	93.0%	7.0%	1
5. Critically read written works, making judgments on their relevant and value.	90.7%	9.3%	5
6. Ability to listen and speak in effective manner.	93.0%	7.0%	2
7. Ability to communicate ideas consistently.	91.5%	8.5%	3
8. Ability to write and speak well in Bahasa Malaysia.	91.5%	8.5%	4
9. Ability to write and speak well in English.	86.0%	14.0%	

(1=not important to 5=very important)

Table 5: Percentage For The Importance Of Problem Solving Skills

Problem Solving Skills	Considered Important	Considered Unimportant	Rank
1. Identify and solve unstructured problems.	89.9%	10.08%	
2. Find creative solution.	90.7%	9.30%	5
3. Integrate multidisciplinary knowledge to solve problems.	93.8%	6.20%	1
4. Perform critical analysis.	86.0%	13.95%	
5. Ability to identify and analyze the cause of any problems.	89.9%	10.08%	
6. Ability to choose appropriate solution to the problems.	90.7%	9.30%	4
7. Ability to apply appropriate solution.	92.2%	7.75%	2
8. Ability to be creative and innovative thinking.	89.9%	10.08%	
9. Ability in decision making.	92.2%	7.75%	3

(1=not important to 5=very important)

of accounting theory and practice are ranked important because future accountants will be competent if they have complete, capable and expertise. It will also benefit them to understand complex accounting and auditing standards. Employers from

Table 6: Percentage For The Importance Of Accounting Theory And Practice

Knowledge of accounting theory and practice	Considered Important	Considered Unimportant	Rank
1. Knowledge of tax and auditing.	82.2%	17.83%	4
2. Ability to identify goals and the information useful for achieving this goal.	85.3%	14.73%	3
3. An understanding the method for identifying, gathering, measuring, summarizing, analysing, and interpreting financial and non-financial data.	86.0%	13.95%	2
4. The ability to use data, exercise judgments, evaluates risks, and solves real world problems.	88.4%	11.63%	1
5. Understanding and applying international accounting standards (e.g. IFRS, IPSAS-cash basis & accrual basis)	81.4%	18.60%	5
6. Understanding complex accounting and auditing standards (e.g. fair value accounting).	80.6%	19.38%	

(1=not important to 5=very important)

AG were believed that capability in utilizing all information in solving problem in a real world is the most important in knowledge and practice, followed by utilizing method to interpret data and ability to identify goals. Even though the knowledge of accounting

theory and practices are not crucially important as it is not at the first, but it was third importance (Cornell & Raj Arora (1998).

Team Work Skills

The future accountants must have the ability to work in a team. Therefore, the result shows that from the employers from AG views, team work is ranked very important. This is because the potential accountants need to deal with co-workers in various situations with confidences and they need to be responsible in each decision make by the team members. Based on the previous study done by Hassall, et.al. (2003), group working skills are also highly valued by employers. Moreover, most of the employers agreed that very important for their employees to work cooperatively, deal with co-workers in various situations with confidence were important, understand and respect each other important, work well with supervisor also important and responsible decision team members were important and in line with research done by Norazila (2010).

Time Management Skills

This result shows that time management is ranked very important by the respondents because it will help the future accountants to organize their workloads, to meet conflict demands and unexpected requirement. They agreed that the most important in time management is to organize workloads in order to be recognize, meet the types, strict and coinciding deadlines. Furthermore, research done by Hassall, et.al. (2003) have clearly place an emphasis on time management skills, the three time management skills as their highest ranked skills.

Table 7: Percentage For The Importance Of The Team Work Skills

Teamwork Skills	Considered Important	Considered Unimportant	Rank
1. Work with others in team.	94.6%	5.43%	1
2. Organize and delegate tasks.	94.6%	5.43%	2
3. Assume leadership positions when necessary.	93.8%	6.20%	3
4. Ability to deal with co-workers in various situations with confidence.	93.0%	6.98%	4
5. Ability to work cooperatively with a variety of individuals.	93.0%	6.98%	5
6. Ability to understand and respect others belief and behaviour.	89.9%	10.08%	
7. Ability to be responsible in each decision make by team members.	93.0%	6.98%	

(1=not important to 5=very important)

Table 8: Percentage For The Importance Of The Time Management Skills

Time Management	Considered Important	Considered Unimportant	Rank
1. Organize the workloads to meet conflicting demands and unexpected requirement.	88.4%	11.63%	3
2. Organize the workloads to be recognize and meet types, strict, and coinciding deadlines.	91.5%	8.53%	1
3. Select and assign priorities within coincident workloads.	89.1%	10.85%	2

(1=not important to 5=very important)

Employability

From overall results, researchers have found that future accountants need to possess skill in working in team, managing time, solving problems, communicate well and completely have enough knowledge of accounting theory and practice in order to be employable in AG.

Descriptive Analysis

The mean are based on 5-point Likert scale. Based on the result, the highest mean is team work which is 4.4828, followed by 4.3850 which is time management. The lowest is knowledge of accounting theory and practice which is 4.2145. As for the standard deviation, the lowest is 0.52529 which is communication skills and the highest is knowledge of accounting theory and practices which is 0.65755.

Table 9: The Most Important Skills For Employability

Employability	Considered Important	Considered Unimportant	Rank
1. In overall, how do you perceived communication skills for potential accountants in AGD in order to be employable.	92.2%	7.75%	4
2. In overall, how do you perceived problem solving skills for potential accountants in AGD in order to be employable.	92.2%	7.75%	3
3. In overall, how do you perceived knowledge of accounting theory and practice for potential accountants in AGD in order to be employable.	89.1%	10.85%	5
4. In overall, how do you perceived team work skills for potential accountants in AGD in order to be employable.	93.8%	6.20%	1
5. In overall, how do you perceived time management skills for potential accountants in AGD in order to be employable.	92.2%	7.75%	2

(1=not important to 5=very important)

Table 10: Descriptive Analysis

Variables	Mean	Standard deviation
Communication Skills	4.3290	0.52529
Problem Solving	4.3428	0.57836
Knowledge Of Accounting Theory And Practice	4.2145	0.65755
Team Work	4.4828	0.54404
Time Management	4.3850	0.60589

CONCLUSION

The main purpose of this study is to identify the important of soft skills for future accountants in The Accountant General's Department of Malaysia (AG). In order for the accountants to be employable, it represent how important the skills which are Communication skills, Problem Solving skills, Knowledge of Accounting Theory and Practice, Time Management skills and Teamwork. In this study, respondents from AG perceived most all five skills as important for future accountants to be developed in order to be employable as Public Sector Accountants. In this study, findings were found in line with previous researchers which focus on accounting area such as Cornell & Raj Arora (1998), Hassall, et.al. (2003), Dixon, Belnap, Albrecht, & Lee, (2010) and Mohamed & Lashine, (2003). The results shown various findings from both perspective as employers and graduates. In this current study, the most important skill in the ability to work in a team is really perceived important for future accountants as for research objective. This indicate that to achieve a goal in every department and ministry, employees were expected to be able to work, communicate,

discuss every aspect in task in a team work. In this research, researchers only focus on employers' perception on the importance of skills for future accountants which opted to develop their career as public sector accountants, since researchers were believed that there is important to focus into the development of public sector accountants instead only focused on private sectors. This is because the findings from current research has provided value added to AG in order to provide more trainee which in line with their perception of the most importance skills. In future, researchers plan to pursue the study from the perspective of other related government agencies and to investigate the different of perceived important of skill among level of position.

Recommendation

The lacking of skill among employees and future employees can be improved based on some training, whether internal or external training. Based from the previous research, the soft skills can be improve through in on-the-job training either on external programs or internal programs (Grant Thornton, 2010). Usually, the external programs are supplemented by materials customized by the organization which are frequently used to develop communication and leadership skills. As for internal programs, there are more often used to build problem solving and critical thinking capabilities (Grant Thornton, 2010). According to the research by Wolosky (2008), organization can embed the various soft skills elements in core service-delivery training where they can contract with outside vendors to conduct the training or develop and conduct the training in house, pointing-out that they may have internal 'universities'.

Regularly, accountants tend to failed when they are needed to apply accounting principles for the real-world situations. This is due to their lack in terms of experiences and related soft skills such as lack of knowledge of accounting theory and practices. In research prepared by Stovall and Stovall (2009), they stated that while accountant learn early to follow rules and reference books to find the correct way to account for specific situation, they are not exposed to the types of real world problems that do not have right or wrong answers. This lack of exposure to exercises involving critical thinking and a typical problem solving hurt accountants later in their professional lives when they must make their own judgments on materiality or on improving a client's business process. This problem can be improved by sending high-performing accounting talent to external training sessions and conferences so that they will share their knowledge and at the same time gaining experiences and information (Grant Thornton, 2010).

Other than outside training, accountant also can improve their soft skills in the public sector itself. Accountant can do one-on-one interaction or personal involvement such as mentoring with their peers (Grant Thornton, 2010). Besides that, empirical study by Grant Thornton (2010) also state that accountant can also do a discussion session with senior leaders where the need for skill building is reinforced including one-on-one skip-level interactions to motivate personal soft skills growth.

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Validating Instruments For Technology Acceptance Model (TAM) And Psychological Attachment Towards Computerised Accounting System (CAS) In Public Sector

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ABSTRACT

Purpose - to validate the factors of Technology Acceptance Model (TAM) and Psychological Attachment towards Computerised Accounting System (CAS) for users' experience particularly public sector from Accountant General's Department (AG).

Design/Methodology/Approach - The survey was adapted the instrument from Malhotra and Galleta (1999). Based on 99 valid respondents collected from a survey questionnaire and Principal Component Analysis (PCA) was employed the validation of instruments.

Findings - The factors of Technology Acceptance Model (TAM) and Psychological Attachment is valid in measuring intention and actual usage of Computerised Accounting

System (CAS). The findings support the theory by Davis, (1989) Davis, Bagozzi, & Warshaw (1989), Matheison (1991), Moore and Benbasat (1991), Taylor & Todd (1995), Venkatesh & Davis (1996) and Kelman (1958).

Research limitations - This research is limited to employees from Accountant General's Department (AG) as Federal Government. In future, research need to generalised to Local Government and State Government in order to represent Public Sector Accounting.

Value - This research have been emphasised on perceived ease of use, perceived usefulness, behavioural intention, actual use, attitude toward using, compliance, identification as well as internalisation. This research need to be done in order to understand the important of Computerised Accounting System (CAS) in public sector accounting since Accountant General's Department (AG) is in progress preparing for accrual basis.

Keywords: Public Sector Accounting, Computerised Accounting System (CAS), Technology Acceptance Model (TAM) and Psychological Attachment.

INTRODUCTION

Public Sector

The public sector plays a role in several level of government such as federal, state as well as local or municipal to provide basic government services. None of individuals or private companies has the power to control the public sector because it is part of life in the aspect of economy and administration that

deals with delivery of goods and services by and for the government. Malaysian public sector have six related components namely are Federal Government, State Government, Federal Statutory Bodies, State Statutory Bodies, Local Government, Town, District Councils and City Halls, and lastly Islamic Council of Malaysia. The Malaysian government's management comprises of three tiers of government for which the Federal Government at the highest tier consisting of ministries, departments and public enterprises. The second tier of the government is the State Government that also consists of ministries but only for Sabah and Sarawak, departments and public enterprises. The last and third tier of the government is the Local Government that is governed by the Local Government Act 1976 which consists of city council, municipal council as well as district council. Public enterprises can be classified either as statutory or non-statutory bodies. The different between these two bodies is that, the setting up of a statutory body is governed by law and also considered as part of the Public Service but non-statutory bodies are established in accordance to the Companies Act 1965 and not subjected to government control (Fatimah et. al, 2009).

Public sector organisations vary in terms of social, economic, political and legal characteristics. The differences in powers and responsibilities to display different patterns of accountability involve different objectives and they are financed in different ways with different organisational structures. All these differences reflect how the public sector development has responded to changing pressures over time. One of the initiatives taken by the government of Malaysia was to launch

the Electronic Government to lead the country into the Information Age. The aim is to provide seamless services and information. It seeks to enhance the interactions between the government, businesses and citizens in the context of convenience, accessibility and quality. Thus, it will improve the flows of information and processes within the government. At the same time, the policy development and coordination as well as enforcement quality and speed can be improved. The use of Information Communication Technology and Multimedia can be fully utilised in transforming the process and delivery of service administration seen as the vision for e-government.

Public Sector Accounting

Public sector accounting practices in Malaysia consists of three major components. Firstly, maintenance of books and records particularly vote book that must be kept by the government agencies for recording expenditures, liabilities, and changes in budget as a financial record. The second component is that all public sectors organisations' accounts are required to be prepared, in compliance with rules and regulations set by the Federal Constitutions, Treasury Instructions and Treasury Circulars, Audit Act 1957, as well as Financial Procedure Act 1957. Finally, seeking approval from parliament for which the preparation of reports and statements must be laid (Fatimah et. al, 2009).

Both users in the private sector and the public sector will be affected from the emergence of the computerised system. As there are claims for the advantage of Information and Communication Technology (ICT) usage and application, government has taken a

step ahead by implementing Computerised Accounting System (CAS) in most of the government departments. It is proven that ICT and CAS together have ease the government in managing the increasing volume of financial data transactions that seems impossible when using outdated system or to compile them manually. By using CAS, it is believed that the performance and productivity can be enhanced hence, lead to better administration of financial and accounting management. Not only provides the accounting report, CAS also enables user to evaluate the output of the particular system as well as the system itself (Azleen, Mohd Rusdan, Mohd Zulkeflee and Rahida, 2007).

CAS used in the government organisation differs from the CAS implemented in the ordinary business and industry organisations due to the customisation and standardisation of the system's flows and processes. In the government context, the accounting information's flow will cover various levels of authority which include district level and state level, as well as the highest level of the hierarchy that is federal government level centralised in the headquarter of Accountant General Department. Malaysia is very different from those of developed economies, in particular the extent and type of government interventions on issue related to accounting and information system (Noor Azizi and Rosliza, 2009).

Traditionally cash basis of accounting has been used across the public sector organisations. The developments of governmental activities over the years in terms of size and complexity have raised concerns over whether the traditional use of cash basis accounting is sufficient for

governmental accounting and reporting. Consequently, there have been discussions on recent years for adopting accrual accounting as an alternative to better financial management and reporting of governmental activities. Although there is a continuing debate over the use of cash versus accrual accounting (Tickell, 2010), accrual accounting has been adopted in the governments of several countries including Australia, New Zealand and the United Kingdom. Similarly, the Malaysian government has also taken various accounting initiatives including accrual accounting in an attempt to improve further its financial management procedures. A key difference between these two bases of accounting can be observed as related to the timing of the recording of the transactions.

Currently, different accounting basis is used by different components of the Malaysian government. Modified cash basis is used by both at Federal and State Government. Meanwhile, Local Government and Islamic Council of Malaysia are using Modified Accrual Accounting. Only statutory bodies are currently using accrual accounting method. All of these accounting systems are intended to provide more information to users while avoiding the complexities of accrual accounting system. The modified cash basis is a hybrid method that combines features of both the cash basis and the accrual basis.

Computerised Accounting System

CAS also being referred as Computerised Accounting Information System (CAIS), in relation to business organisations, has become an important tool to improve the efficiency of the organisation and support its competitiveness through providing

management with financial and accounting information. Such information is used to make different decisions regarding planning, control, performance evaluation and other decisions (Mohammad Nayef, Jawabreh, Muneer and Sameer, 2011). In this emerging economy, the use of CAS is vital in completing task effectively and efficiently. Hence, in order to ensure that CAS can be used with its upmost benefits, the acceptance towards the system is crucial not only from the user perspective, but also from the organisational context.

Being part of the information technology, CAS requires innovation and development that will contribute to its usefulness. Initially accepted system will not determine the actual usage by the users for which their behaviours and attitudes will influence their intentions to use the system. For instance, in the study done by Elbanna (2010), has investigated a case of an e-procurement system that was initially accepted for its usefulness and ease of use. The system was later rejected and not put in any significant use when it went live. Using workplace context, data analysis reveals the complex ramification of systems configuration and business process change that could affect system use and thus, reversing its initial acceptance and positive intention to use.

In other cases, in order to develop a new system that is more integrated, the analysis on the existing system must be evaluated properly. This is because, the purpose of developing new system is to improve and update the current system. Thus, according to Putra and Budiyanto (2009), implementation and maintenance phase in the development of a new system will include both testing user acceptance and

evaluating application system performance based on its functionality to meet the needs of users. If there are fundamental changes in the system especially in terms of user needs, this will cause a total change in the application system, it will be recommended for application system development in the future.

In relation to the study done by Khalil Mesbah (2009), the acceptance from public accountant in Tripoli of Libya on the adoption of technology is important because CAS for government agencies is a system that has been designed based on standardisation. Most importantly, the two main constructs of Technology Acceptance Model (TAM) which are perceived ease of use and perceived usefulness were confirmed as variables that give the impact for which influenced the intention of public accountants to use CAS. At last, this determined the changes occurred in behavioural and performance which regards to the applications performed to business functions of public sector organisation.

According to Saleh (2011), CAS assists a company to conduct its operations and activities as well as provides information to the variety interest of users. It is seen as the combination of technology and human interaction that could be employed by small business companies to achieve an efficient and excellent operation. Accountants role are crucial in decision making process associated with CAS and it helps to ease the accountant's task of record keeping for which computerised accounting and accounts management were more customised. Thus, CAS contributed to accuracy of information and time efficiency which in turn, leads to cost efficiency. Revolution of information

technology has increase the accounting efficiencies since CAS base software made things smarter and cost effective, aligned with the government's target to have better records and ultimately improving the business management.

Recent developments in the Malaysian governmental accounting in bringing about improvements in governmental budgeting and financial management reveal a clear willingness of the government to embrace on features of new public financial management. Various re-engineering efforts have been taken by the government to develop its accounting system. For instance, Government Financial and Management Accounting System (GFMAS), has been developed to assist accrual accounting basis in capturing accounting transactions and financial preparation. This system is expected to be flexible and in compliance with accounting standards based on cash an accrual basis, or a hybrid of both. The accrual accounting system will be part of the support system for the GFMAS. This initiative is seen as an important stepping stone for migrating to accrual accounting.

Improving accounting practices and financial management of the government was seen as one of the agenda to strengthen accountability of the public sector, which can be achieved by focusing on enhancing the effectiveness in the management of the government's accounting system through the implementation of integrated financial management accounting system, improving the process of budget planning and control, strengthening the implementation of the micro accounting system and a standard computerised accounting system in statutory bodies.

There are several accounting information system that are currently being established by the public sector which include Government Financial and Management Accounting System (GFMAS), Standard Accounting System for Government Agencies (SAGA), State Government's Standard Computerised Accounting System (SPEKS), Micro Accounting System (SPM), and Electronic Budget Planning and Control System (e-SPKB).

GFMAS is the main CAS that is currently being used by AG Department and was developed in year 2005. This system will enhance operational efficiency and effectiveness to enable AG Department to deliver value-added service especially to Federal Government. This system also will be able to capture accounting transactions and prepare financial statements based on accrual basis of accounting. In order to ensure effectiveness of the project, the GFMAS Project Management team is adopting the Accelerated System Application Program (ASAP) methodology to manage the implementation activities and deliverables of the project.

GFMAS has been developed with several objectives. Firstly, it is built to improve the quality of services provided by AG Department through the usage of the latest information technology application. Secondly, it acts as a standard mechanism to monitor all accounting transactions in government context. Thirdly, GFMAS emerges to overcome the problems and setbacks arose from the legacy or existing government accounting system. Finally, in regards to the accounting and financial matters, GFMAS definitely could assist AG Department in providing value added

services to government and its agencies.

The development of SAGA has been done according to phases. Until now, there has been five phases being implemented under the SAGA Project which consists of 51 Federal Statutory Bodies. The aim of SAGA is to ensure the accounts of the statutory bodies are being updated daily and submitted in time for auditing purposes. SAGA is a web-based financial solution that will enable efficient processing of financial information at both the operational and management levels of an organisation in particular the local government agencies. It is easily accessible, flexible, efficient and reliable to meet today's demand for information.

In addition, SPEKS has been developed mainly for the State Governments in Malaysia with the purpose to ease and increase the productivity of financial management, to prepare a complete and accurate financial statement in time, to improve the State Financial Administration as well as to prepare the State Government towards the image of Electronic Government of Malaysia. Meanwhile, SPM is a process of collecting, calculating and analysing the total cost of output for each of government's programme and activity. Other than that, the system called e-SPKB has been designed and implemented to fulfill the necessity of financial control as well as to provide financial information needed for government's projects. It helps to control the budgetary planning and monitor the government spending as well as fasten the preparation of financial documents.

PROBLEM STATEMENT

When there is an existence of a system, it must be capable of fulfilling its potential benefits and usage. CAS in AG has gone through a successful development but the performance and effectiveness of the system will not determine the acceptance towards the usage of CAS by the users based on their experiences. Perceived ease of use and perceived usefulness are the two main factors that will impact the behaviour. Thus, the intention of using the system will also be affected. All of these will depend on the individual perceptions and varies among people that are using the system (Davis, Bagozzi and Warshaw, 1989).

Certain changes have been done in the AG regarding the CAS itself since January 2015, all reporting entities in the public sector are expected to produce financial statements prepared using the accrual basis in Malaysia. Based on research done by Wynne (2004), they found the adequate of IT system is one of risk when moving from cash basis to accrual basis. Thus, employees will have no choice but to use the system implemented by the government and follow the process flow of the accounting information, there are potential reluctant to change exists when new system is enforced. This is because; there are different level of hierarchy and positions held by the users. The pressure of completing task using the new system will be higher in the lower level employees as compared to the top management. In this situation, it is believed that management support and usage experience of prior system can help the users to accept the new system. The behavioural intention and usage will complement the acceptance of the system during the actual usage in the

workplace (Muhammad Sharif, Fida, Abdul Fatah and Farwa, 2011).

As Technology Acceptance Model (TAM) has been employed in many previous studies, it is proven that TAM for information technology is not enough from individual aspect but also need to take into account from the organisational aspect, for instance by looking from the actual work condition point of view. TAM has mainly focus on individual acceptance and being criticised for its treatment of individual acceptance as distinct at the organisational level in terms of implementation success (Venkatesh, Morris, Davis and Davis, 2003).

According to Lu, Yu, Liu and Yao (2003), many studies have modified TAM to fit their researches and in order to get accurate result; these studies also have implemented an extension to the TAM initially based on the purpose and samples of the studies. This is to ensure that the findings can be later use for further research and realistic to the field of study. For example, as outlined by Kelman (1958) and further investigated by Malhotra and Galletta (1999), the three processes in social influence have a big impact to TAM which is specifically related to individual behaviour that includes compliance, identification and internalisation. Firstly, compliance happens when an individual adopts the induced behaviour for which to expect gaining rewards or avoiding punishments but not because she believes in its content. Secondly, identification related to when an individual accepts influence because she wants to maintain or establish a satisfying self-defining relationship to another person or group. In addition, internalisation occurs when an individual accepts influence because it is in relation

with her value system. These processes are believed leading to the commitment or in other words, psychological attachment to the continuous usage of the information system as whether the system is actually accepted or not.

RESEARCH OBJECTIVE

The objective is to validate the factors of Technology Acceptance Model (TAM) and Psychological Attachment towards Computerised Accounting System (CAS) for users' experience particularly public sector from Accountant General's Department (AG).

SIGNIFICANCE OF THE STUDY

There are prior researches related to TAM and CAS but particularly focusing in private sector as well as academic institutions and therefore, lack of studies being done in public sector or governmental context. Thus, this study aims to contribute to the existing body of knowledge in the area of accounting for public sector regarding the use of CAS and the intention to use it.

Within three years time, the government will fully implement the accrual accounting system, thus the accounting standards and processes will also experience changes. One of the reasons to make accrual accounting a success, all accounting systems need to be computerised. In Wynne (2004) stated that an understanding of the computerised accounting systems that are needed including the general ledger system. In order to improve the CAS in Accountant General's Department, this study is

significant in assisting the government to further understand the behaviour towards the use of existing CAS. The call for this study to be done is that the existing CAS will be integrated with the accrual accounting system that will be further enforced in public sector specifically.

According to Tickell (2010), financial institutions around the world have realised how important the governments' financial reporting improvement. This includes the World Bank, the United Nations Development Program, the International Monetary Fund as well as the Asian Development Bank that strongly encouraged the migration to accrual accounting by developing countries and it is proven that financial aid coming from these institutions are mainly to improve the CAS and in purpose to adopt for accrual accounting. CAS requirements in relation to its role and function as well as training and communication strategies will be further determined by the accounting policies and standards mandated for accrual accounting purpose. Any incorrect software purchased will burden the implementation of CAS and making it too complex to be used. For instance, this issue has been faced personally by the government of Fiji in their two previous attempts in accrual accounting project that failed. As a result, Fiji's Ministry of Finance took the decision to further utilise the previous software that has been purchased to make it capable in handling new range of transactions aligned with accrual accounting. It is further concluded that in accrual accounting adoption, many developing nations had linked their aid funds to modernise their CAS because it will contribute to the success of the whole project.

In relation with the research done by Grande, Estebanez and Colomina (2011), CAS can improve the productivity of an organisation by the innovation incentive that being put in place for this technology development. It also can help to reduce the obstacles coming from the financial and organisational aspect. Accounting systems have gone through a better use by the companies to improve their relationships with suppliers and customers from this new computer tools. CAS has fastened tax management as well as improving the accounting and finance administrative management. Moreover, this sophisticated statistical software has the capability of predicting future earnings and help companies to gauge some operations' risk. Investment in CAS also helps expanding the scope of action which in turn provides time saving for certain tasks and reducing firms' cost. In other words, when these technology innovations are being used properly, the firms' productivity will also increase. Similarly, Saleh (2011) has found that the capabilities owned by CAS paired by the adoption of technology will improve the firms' performance in both financially and non-financially.

Government Accounting Standards Advisory Board of India has outlined that the use of CAS at transaction level will enhance the compilation and smooth flow of information. The system in the Treasury and District Treasury offices need to be computerised initially in order to investigate the extent of networks throughout the process. This is because the extent of computerisation will depend on user capabilities as well as availability of computers.

Since CAS plays an important role in the accounting and financial management of

AG, it is crucial to investigate the behavioural intention towards the CAS implemented using TAM. This study will indirectly help the public sector towards the achievement of the excellent and better performance. Theoretically, this study measures and validates the elements of Malhotra and Galletta (1999)'s extension of TAM. In addition, these elements are very useful in practice, not only for public sector but also for private sector.

This paper continues with a literature review in discussing and elaborating of Technology Acceptance Model (TAM) and Psychological Attachment. Next, the research design includes a sample; instrumentation and data collection are presented. This is followed by quantitative analysis and the findings are discussed using descriptive analysis, Principal Component Analysis (PCA) and reliability analysis. The final part concludes the study and provides suggestions for further research.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

TAM is an information system (IS) theory that shows how users can accept and use a technology. In 1989, TAM has been introduced by Davis where it explains the computer-usage behaviour. Davis has noted that SN is an important consideration where it represents the social influence. It also emphasizes the role of social influence represent an important area for better understanding.

From the previous study by Malhotra et al. (1999), it has proven that, towards understanding the information system (IS)

in usage and acceptance behaviours, they need to represent an important theoretical contribution in using the Technology Acceptance Model (TAM). However, there are several researchers found that TAM is not complete in one important aspect where it does not take account for social influence in the adoption and utilisation of new IS. Moreover, the basic theory of Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1980) is very difficult to distinguish if the behaviour is due to the influence of someone who shows the desire of a person or of their attitude. Next, SN concept is based on the theory of TRA. It also has theoretical and psychometric problems.

TAM has its own goals and it have been achieved in which the TAM is a model that can influence the research. It can be explained by a computerised acceptance, user behaviour that can be traversed by a variety of End User Computing (EUC) technology and user populations (Malhotra et al., 1999).

Based on study of Khalil Mesbah (2009), TAM plays an important role in the computerised management of IS. In this study, there were two objectives that can be explained, which it should give an idea that can be opened up to researchers to study the use of new technologies and examine the factors that influence the recruitment of technology adoption among public accountants for each government agency. Most previous researchers have examined that the end-user technology is quite easy to use. It focused on the adoption of technologies to illustrate the influence of different individuals. To analyse the intention of CAS usage is a scientific activity to determine the level of technology adoption and to

make a combination of uses and facilities to represent the TAM theory in which they can improve the performance of public use in the technology sector organisation.

Furthermore, TAM also has played a role in the use of internet. According to McKechnie, Winklhofer and Ennew (2006), researchers found that TAM model serves as a theoretical basis for identifying key factors that affect the use of the Internet. Perspective based on the process of innovation, the Internet can provide a clearer image of the Financial Services (FS). In this study, the results shown that the TAM model can help to provide a good understanding of the factors that influence the level of use.

Moreover, an adoption of Innovation Management Applications (IMAs) can improve the TAM. From the study done by Plewa, Troshani, Francis & Rampersad (2012), this study contributes to the literature by separating the influence of the use of IMAS and the relationship between the performances of the innovation process that can be verified through perceived usefulness and compatibility IMAS through the user's work style. In addition, the study also contributes by suggesting a model of adoption and it should be verify. It can connect to the adoption of the IMA to the innovation process, thus it is distinguished in technology adoption research.

Other aspect from a research by Elbanna (2010), TAM may reflect one of the most influential theories in information systems (IS). However, its simplicity can prevent researchers to explore beyond TAM and investigate further with more complex issues. Purpose of this paper was to consider a direct relationship between the

intentions of the adoption and use of IS with its actual use. Any factors that can reduce the actual initial intention in the use of IS were also investigated.

However, studies done by Saleh (2011) mentioned that individual's attitude using the CAS can motivate the actual usage of it. It is a function of an individual belief when using the technology and the value he or she was looking for. CAS has been valued by accountants not only for face to face conversation but also for making interest based decision as they seek any chance to maintain business group booking on the internet. Moreover, when there is a lot of integration rather than the past systems, the process will be more efficient and accurate. Analysing the Perceived Ease Of Use (PEOU), Perceived Usefulness (PU) affects on the intention towards using CAS as dependent variable, required the basis of TAM in exploring the actual usage of CAS.

Perceived Usefulness (PU)

In the establishment of PU in study done by Davis (1989), it defines as users who use a specific application system to improve their work performance in their respective organisations. Based on Venkatesh (2000), PU and attitudes have a poor relationship whereas PU and intentions have a strong link. PU was influenced by PEOU as the use of a simple and useful technology can be successful. Moreover, in the TAM, extrinsic motivation and associated intermediate can be captured through PU constructs.

Based on Ahlam Abdullah (2011), a system having high PU response reflects that a user believe that the system will give positive impact on his or her performance and this is why PU is defined as the extent of fulfilling

a purpose by using CAS. According to Khalil Mesbah (2009), PU will be the first variable that refer to people who is tend to use or not to use an application to extent of their beliefs when they need to perform their job. If someone intended to change the argument, it should has contain a well-supported facts to influence someone beliefs in the PU systems.

Regarding to Venkatesh and Davis (2000), demonstrability have a direct influence on PU. Individuals who can be expected to form a more positive perception on the use of the system, meaning the results can easily be seen. Besides, in terms of job characteristics model, it is associated with any working knowledge of a person as a motivation underlying the work of a psychological state. In addition, findings from Wang (2002) indicated that in which the importance of the effect of PU, PEOU, and Perceived Credibility (PC) were seen on behavioural intentions that definitely can be observed. For PEOU, it has a strong influence from either PU or PC.

Perceived Ease Of Use (PEOU)

PEOU has been used by many past researchers but it was first established by Davis (1989). PEOU is important to influence user acceptance and usage behaviour of Information Technologies (IT). In the study done by Malhotra et al. (1999), PEOU refers to users who expect the level of the target system to be free from effort. Internalisation of new system may influence attitude towards the use of new IS than PEOU.

However, in the study done by Saleh (2011), beliefs in PEOU are hypothesised to be a predictor of PU. Both factors can be influenced by external variables, for example

computer self-efficacy. From the study done by Venkatesh (2000), it was found that some past researchers have investigated about the understanding on how the perception forms and changes over time. Usually those who have much experience could improve the perception of the ease of use. Meanwhile, it is still based on common beliefs about computers and their uses in which they can adapt themselves to the objectives of the usability, the new system of environmental controls and systems that are easy to see. Moreover, the remains of attitude will help better to understand the influence of PEOU and PU on the key dependent variable of interest intention.

According to the studies by Khalil Mesbah (2009), CAS is based on the usefulness and ease of use for measuring the technology acceptance. From this perspective, it may happen when the behavioural and performance changes through applications to the business functions of public sector towards the acceptance of technology. However, it can be confirmed by the relationship between PU and PEOU in which they can contribute positively to the use of CAS acceptance among public sector organisations. Besides, it can provide estimates for the model of research and make recommendations to the component that include this particular construct in order to achieve successful adoption of CAS.

Regarding the study that has done by Lin and Chang (2011), past research has overlooked the role of consumers' Technology Readiness (TR) plays in adoption of Self-Service Technologies (SSTs). The study was aim to fill the research gap by developing and testing a model that integrates the role of TR into the TAM. The

results have indicated that customer TR enhances PU, PEOU, attitude towards use, and intention to use. It also shows that TR attenuates the positive relationship between perceived ease of use and attitude toward using SSTs.

Apart from that, Long (2010) has found that the relation between PU and PEOU, from a causal perspective, ease of use acted as an antecedent to usage. Other than that, PEOU is major to determine the attitude toward use in the TAM (Lu et al., 2003). PU and PEOU are different in nature but they are related in one specific construct. It is because PEOU have a positive impact on the PU in the near future. Then, PEOU is easier to use in technology. It is because they can spend time to do something rather than figure out on how to use the systems.

Attitude Toward Using CAS (ATU)

Attitude is basically referred to a perception where it is generally depending on positive or negative views of a person, place, thing, or event. From the study done by Malhotra et al. (1999), the belief structure instability which includes PEOU and PU may be further understood by the role of social influence processes associated with technology acceptance and usage behaviour in the utility of certain technology context. Such cases are important because attitude with the absence of external influences will cause the usage behaviour to be more stable.

From the study done by Robinson (2006), overall usage of technology is defined as attitude. The attitude model has been constructed, in relation to attitude toward behaviour (Theory Reasoned Action (TRA), theory of planned behaviour (TPB) by Fishben and Ajzen (1975), and combined

TAM and TPB (C-TAM-TPB)) by Taylor and Todd (1995), intrinsic motivation (motivational model (MM)) by Davis, Bagozzi, and Warshaw (1992), and affect toward use (model of PC utilisation (MPCU)) by Thompson, Higgins, and Howell (1991). These entire constructs have related to the individual's general feeling or affect associated with the behaviour of using technology. A positive attitude towards using Information Technology (IT) would leads to positive behavioural intention. Moreover, highly using PU and PEOU would lead to positive attitude towards usage where it leads to the behavioural action of using actual system. Then, cultural perspective of power distance in the TAM model will get an additional insight into attitude and usage (Kellermanns and Islam, 2004).

From the study done by Khalil Mesbah (2009), it is found that an attitude towards behaviour is a stage to perform the behaviour whether it is positive or negative value. Over the past 30 years, the attitude-behaviour is the most popular topic for research. This is because the relationship can give better understanding to influence an action as well as learn how the brain works. From the perspective of theory, the researcher has posited to support a theory on how individual make a difference on new acceptance IT through influence on beliefs. TAM is said to be a parsimonious and prominent concept of usefulness and ease of use beliefs. Besides that, from study done by Saleh (2011), TAM proposes the use of technology is motivated by an individual's attitude toward using CAS. It is a function of the beliefs in using the technology and an evaluation of the value when using it.

Behavioural Intention (BI)

Behaviour has a range of actions where it comes from the attitude of a particular person. Human behaviour can be common, unusual, acceptable, or unacceptable. It can be evaluated through the acceptability of behaviour using social norms and regulate behaviour by means of social control.

BI has also been developed by Davis (1989) where the most important that an individual need to focus on the determinants of new TAM when using the BI or behaviour itself. Based on Khalil Mesbah (2009), BI in CAS was defined as function on attitudes towards behaviour and SN. This can determine how to predict actual behaviour for individual. While the intention is the cognitive representative available for a person to perform a given behaviour and it is considered as a matter immediately preceded the behaviour.

According to Saleh (2011), BI is a major determinant of user behaviour while other factors influence user behaviour indirectly against BI. If an individual want to deliver some information in the report, it must be in a good condition, so it can be translated into intention to usefulness of CAS. Regarding to the study done by Muhammad Sharif, Fida, Abdul Fatah, Farwa (2011), it has been proven that behaviour can caused from positive or negative feelings that depends on the individual's observations or performance. The PU and PEOU have given the significant influence against of attitudinal beliefs on behavioural intention. The results in this study have found that if attitudinal beliefs are positive towards acceptance of the system, it may have a positive effect on behaviour intention for their use.

According to Malhotra & Galletta (1999),

both PU and PEOU can be predicted by the attitude of using the system to benefit users. Attitude (A) and PU influences the individual's behavioural intention (BI) to use the system. Actual use of the system is predicted by BI. Apart from that, the main relationship between two key beliefs constructs and users' attitudes are intentions and adoption behaviour. It represents that attitude towards using a new IS can be determined by users' perceptions of usefulness and ease of use of the system. Furthermore, attitude towards using the system, in turn, is the main determinant of BI to use, and hence the use of the system (McKechnie, Winklhofer, & Ennew, 2006).

Moreover, the study done by Aderonke and Charles (2010), presented that PEOU and PU will not fulfil the intention of the consumer. Thus, the need to examine additional factors exists to predict consumer acceptance. Besides that, according to Wang (2002), the benefit of using TAM is to understand system usage behaviour that provides a framework to investigate the effects of external variables on system usage. Thus, to be more consistent on this research, individual differences can refer to features such as personality and demographic variables, as well as situational variables that give a difference to certain circumstances such as experience and training.

Actual Use (AU)

AU is actually has been adopted from prior studies where it has already been established in term of its reliability and validity. However, AU is predicted by the BI. It is measured in terms of frequency of system use and the volume of system use by the user. Moreover, TAM can be observed on how to be a reliable predictor

for future actual use of technology. Besides that, expectations of future use are based on internalisation and identification. It would be more highly embedded with actual system use.

In contrast, an expectation of future use is based on compliance. It will be less correlated with actual system use. Thus, to propose conceptualisation, a better understanding should be developed which relates to expected use and future use. So the analyses can lend credence to the hypothesised influence of attitude and intention of expected use (Malhotra & Galletta, 1999).

Psychological Attachment

Psychological attachment is an important construct because it operates in a variety of social influence processes that affect a person's commitment to the use of IS. There are three different processes to explain social influence that affect individual behaviour: (1) compliance, (2) identification, and (3) internalisation (Malhotra & Galletta, 1999).

In regards to the study by Kelman (1958), the definition of compliance, identification and internalisation were clearly stated. Compliance is caused by social effect of accepting influence and identification is caused from the act conforming as such. For internalisation, it is caused due to the content of the new behaviour. Each of these corresponds to a characteristic pattern of internal responses in which the individual will engaged to adopt the induced behaviour.

In another study done by Kelman (2005), there were three process models of social influence and to trace its evolution into a

broader area against social psychological model. The core issues of social entities must be placed as negotiating their social environment. From the view of this related research, public conformity to social influence and private acceptance of the opinions or positions advocated by the other represent qualitatively distinct processes, each with its own distinct set of determinants. Moreover, a social influence analysis can address two issues which are; first, the adoption of specific elements of the national identity and second is the development of an orientation to the nation itself.

Based on the research done by Cheung and Lee (2010), the usage of an online social network by individual need to conceptualise as intentional social action and the relative impact of the three modes of social influence processes are based on compliance, internalisation, and identification. Social influence has been used widely in group and collective behaviour. The past researches have explored where the roles of compliance (SN), internalisation (group norm), and identification (social identity) play in explaining intentional social actions.

RESEARCH METHODOLOGY

Population And Sample

The population for this study consists of executives and non-executives from AG at its main headquarter located in Putrajaya, Malaysia. The lists of positions of each executive in each department are obtained from the AG directory. The questionnaires were randomly distributed to the executives and non-executives, which expected to receive feedback from 200 respondents. As a result, 111 instruments were collected but

only 99 were valid.

Instrumentation

There are two parts of the questionnaire. Part A is the demographic which includes information such as gender, education level, department, position, year of service, additional computerised accounting course as well as current use of government accounting system. Part B (as in Table 2) is the factor for TAM and Psychological Attachment includes perceived ease of use,

Table 2: Instrument

TAM and Psychological Attachment
<p>Perceived Ease of Use (PEOU)</p> <ol style="list-style-type: none"> 1. Learning to operate CAS is easy for me. 2. I find CAS to be flexible to interact with. 3. I find it easy to get CAS to do what I want to do. 4. It is easy for me to become skilful at using CAS. 5. I find CAS easy to use. 6. My interaction with CAS is clear and understandable. <p>1= Very Unlikely – 5= Very Likely</p> <p>Perceived Usefulness (PU)</p> <ol style="list-style-type: none"> 7. Using CAS would improve my job performance. 8. Using CAS in my job would enable me to accomplish tasks more quickly. 9. I would find CAS useful in my job. 10. Using CAS in my job would increase my productivity. 11. Using CAS would enhance my effectiveness on the job. 12. Using CAs would make it easier to do my job. <p>1= Very Unlikely – 5= Very Likely</p> <p>Behavioral Intention (BI)</p> <ol style="list-style-type: none"> 13. I intend to use CAS for communicating financial information. 14. I intend to use CAS frequently in my job. 15. I intend to use CAS in doing my job. <p>1= Strongly Disagree – 5 = Strongly Agree</p>

Actual Use (ACTUSE)

16. How many times do you believe you use CAS during a week?

1= Not at all, 2= About once a week, 3= 2 or several times a week, 4 = About once a day, 5= Several times a day

17. How many hours do you believe you use CAS every week?

1= Less than 1 hour, 2= Between 1-5 hours, 3= Between 5-10 hours, 4= Between 10-15 hours, 5 = Between 15-20 hours, 6 = Between 20-25 hours, 7 = More than 25 hours

Attitude Toward Using (ATT)

18. All things considered, my using of CAS in my job is a(n)_ Extremely Negative to Extremely Positive idea

1= Extremely Negative 2= Quite Negative, 3= Slightly Negative, 4= Neither Negative Nor Positive, 5= Slightly Positive, 6= Quite Positive, 7=Extremely Positive

19. All things considered, my using of CAS in my job is a (n)_ Extremely Harmful to Extremely Beneficial_ idea.

1= Extremely Harmful 2 = Quite Harmful, 3= Slightly Harmful, 4= Neither Harmful Nor Beneficial, 5= Slightly Beneficial, 6= Quite Beneficial, 7= Extremely Beneficial

Internalisation

20. What the use of CAS stands for it is important for me.

21. The reason I prefer use of CAS is because of the underlying organisational values.

22. I like using CAS primarily based on the similarity of my values and the organisational values underlying its use.

1= Strongly Disagree – 5 = Strongly Agree

Identification

23. I feel a sense of personal ownership about the use of CAS.

24. I talk up the use of CAS to my colleagues as a great use.

25. I am proud about using CAS

1= Strongly Disagree – 5 = Strongly Agree

Compliance

26. My private views about use of CAS are different than those I express publicly.
 27. Unless I'm rewarded for using CAS in some way, I see no reason to spend extra effort in using it.
 28. In order for me to get rewarded in my job, it is necessary to use CAS.
 29. How hard I work on using CAS is directly linked to how much I am rewarded.
- 1= *Strongly Disagree* – 5 = *Strongly Agree*

Adopted from Malhotra and Galleta, (1999)

perceived usefulness, behavioural intention, actual use, attitude toward using, compliance, identification as well as internalisation with likert scale with measurement using a seven-point scale ranging from 1 (strongly disagree) to 5 (strongly agree) and 1 (very unlikely) to 5 (very likely). Previous study done by (Malhotra and Galleta, 1999) was used as a guideline for constructing operational and measurement of the variable. This is because researchers were also tested three different variables in their research; internalisation, identification and compliance. However, the scales were already established according to Davis, (1989) Davis et. al (1989), Matheison (1991), Moore and Benbasat (1991), Taylor & Todd (1995), Venkatesh & Davis (1996) and Kelman (1958).

From Table 3, a total of 67.7 percent are female respondents that represent more than half of the total sample. Most of them have Diploma as their education level with 37.4 percent followed by SPM/STPM holders at 28.3 percent. 27.3 percent of the respondents came from Centres Operation and Agencies Services Division (BPOPA) and 25.3 percent of them are currently serving Information

Technology Management Division (BPTM). Respondents that are using the CAS hold the position of Assistant Accountant at 28.3 percent while 16.2 percent of them work as Accountant Clerk.

From the survey, it is found that 61.6 percent of the respondents agreed that the accounting system used in AG is a combination of manual and computer processes while 38.4 percent of them agreed that their accounting system is fully computerised. The respondents have also obtained additional computerised accounting course with 31.3 percent of them represent solely UBS and 16.1 percent of the respondents have enhanced their knowledge in the combination of two software and above. The results obtained from the survey also shown that GFMAS stands as the top CAS being experienced with 59.6 percent followed by e-SPKB at 17.3 percent. A total of 15.1 percent of the respondents experienced combination of two or more CAS in performing their jobs. In line with the result about experienced use of CAS, GFMAS are the most preferred CAS among users from AG with 59.6 percent of them agreed.

Table 3: Respondents' Profiles

	Frequency	Percent
Gender		
Male	32	32.3
Female	67	67.7
Level of Education		
SPM/STPM	28	28.3
College Certificate	11	11.1
Diploma	37	37.4
Degree	19	19.2

Masters	3	3.0
Professional Certificate	1	1.0
Current Department		
Accounting and Management Development Division (BPPP)	13	13.1
Information and Technology Management Division (BPTM)	25	25.3
Centres Operation and Agencies Services Division (BPOPA)	27	27.3
Trust and Securities Managemnet Division (BPAS)	9	9.1
JANM Wilayah Persekutuan Putrajaya	20	20.2
Others	5	5.1
Current Position		
Chief of Assistant Director	3	3.0
Senior Assistant Director	4	4.0
Assistant Director	7	7.1
Accountant	8	8.1
Chief of Administrative Assistant	2	2.0
Finance Assistant	2	2.0
Senior Accountant Assistant	2	2.0
Information Sytem Officer	1	1.0
Information Technology Assistant Officer	2	2.0
Data Processing Assitant Officer	5	5.1
Administrative Officer	2	2.0
Senior Administrative Officer	2	2.0
Administrative Assistant	11	11.1
Assistant Accountant	28	28.3
Accountant Clerk	16	16.2
Others	4	4.0
Accounting System Use In Department		
A combination of manual	61	61.6

Fully computerised	38	38.4
Experience In Using Accounting Software		
MYOB	9	9.1
UBS	31	31.3
LOTUS 123	5	5.1
MrAccounting	4	4.0
QuickBook	1	1.0
Others	33	33.3
UBS plus QuickBook	1	1.0
MYOB plus LOTUS 123	1	1.0
MYOB plus UBS	3	3.0
MrAccounting plus Quick-Book	3	3.0
MYOB plus UBS plus MrAccounting	1	1.0
UBS plus MrAccounting	5	5.1
Quickbook plus Others	1	1.0
UBS plus Others	1	1.0
Experience In Using Government Accounting System		
Government Financial and Management Accounting System (GFMAS)	59	59.6
Standard Accounting System for Government Agencies (SAGA)	3	3.0
State Government's Standard Computerised Accounting System (SPEKS)	1	1.0
Micro Accounting System (SPM)	1	1.0
Electronic Budget Planning and Control System (e-SPKB)	17	17.2
Others	3	3.0
GFMAS plus e-SPKB	11	11.1
GFMAS plus SAGA plus SPEKS	3	3.0
GFMAS plus SAGA	1	1.0

Table 4: Descriptive Analysis

	Mean	Std. Deviation
Perceived Ease of Use (PEOU)	3.7912	.63368
Perceived Usefulness (PU)	3.8451	.50240
Behavior Intention (BI)	3.6869	.60388
Internalisation and Identification (IDIN)	3.6684	.50423
Actual Use (ACTUSE)	3.6515	1.31214
Compliance (COMP)	3.2753	.77467
Attitude Towards Using (ATT)	5.5505	.97021

The mean obtained for all these constructs shown that they are above average with the highest mean is obtained for perceived usefulness (PU) at 3.8451 followed by Perceived Ease Of Use (PEOU) at 3.7912. Standard deviations for both constructs are 0.5024 and 0.6337 respectively. Apart from that, Attitude Towards Using (ATT) and Actual Use (ACTUSE) were analysed based on 7-point interval scale. The mean obtained for attitude is 5.551 which exhibit value above average with the standard deviation of 0.9702. Meanwhile, for the variable of Actual Use (ACTUSE), the mean shown a result of 3.6515 with standard deviation value of 1.3121 that is highest compared to all the other variables. The reason for choosing the 5-point and 7-point likert scales are based on the results found by Hinkin (1995), that the most adequate measures to be used in a study are scales that made up of five to six items that utilise 5 or 7-point likert scales. This is because a proper length of scale can be the most effective way to provide adequate internal consistency in reliability and minimise the biases of response.

Factor Analysis For Technology Acceptance Model (TAM)

Based on Table 5, there are five factors that contribute to the Technology Acceptance Model (TAM) and Theory Of Reasoned Action (TRA). The factors' measurement was taken from Davis (1989), Davis, Bagozzi and Warshaw (1989), Matheison (1991), Moore and Benbasat (1991), Taylor & Todd (1995) and Venkatesh and Davis (1996). In this study, researcher has implemented the Principal Component Analysis (PCA) with varimax rotation for the proposed construct in order to ensure the empirical summary of the data set. The Kaiser-Meyer-Olkin's (KMO) measure of sampling adequacy is 0.867. According to Tabachnick and Fidell (2007), The KMO index ranges from 0 to 1, with 0.6 suggested as the minimum value for a good factor analysis. The rule of thumb for the Bartlett's Test of Sphericity should be significant ($p < .05$). In this study, the Bartlett's Test shows $p = .000$. From this result, factor analysis is appropriate to be implemented.

In the case of the Technology Acceptance Model (TAM) and Theory Of Reasoned Action (TRA), the factor analysis yielded five factors with an eigenvalue greater than one. The emerging five factors are those that were expected conceptually and can be clearly identified as relating to the Technology Acceptance Model (TAM) and Theory Of Reasoned Action (TRA): perceived ease of use, perceived usefulness, actual use, behavioral intentions, and attitude toward using. Furthermore, using Kaiser's criterion, the rule of thumb is the study only interested factors that have an eigenvalue of 1 or more. From this study, there are five eigenvalue with values provided more than 1. These five factors explain a total of 77.203 percent of the variance.

Factor Analysis Of The Studied Constructs

Table 5: Factor Loading for Technology Acceptance Model (TAM)

	Rotated Component Matrix				
	1 PEOU	2 PU	3 ATT	4 BI	5 ACTUSE
Learning to operate CAS is easy for me	.718				
I find CAS to be flexible to interact with	.811				
I find it easy to get CAS to do what I want to do	.790				
It is easy for me to become skillful at using CAS	.774				
I find CAS easy to use	.856				
My interaction with CAS is clear and understandable	.835				
Using CAS would improve my job performance		.790			
Using CAS in my job would enable me to accomplish tasks more quickly		.788			
I would find CAS useful in my job		.642			
Using CAS in my job would increase my productivity		.761			
Using CAS would enhance my effectiveness on the job		.795			
Using CAS would make it easier to do my job		.774			
I intend to use CAS for communicating financial information				.841	
I intend to use CAS frequently in my job				.658	
I intend to use CAS in doing my job				.629	
How many times do you believe you use CAS during a week?					.740
How many hours do you believe you use CAS every week?					.817
All things considered, my using of CAS in my job is a(n)_ Extremely Negative to Extremely Positive idea			.863		
All things considered, my using of CAS in my job is a(n)_ Extremely Harmful to Extremely Beneficial_ idea			.924		
Communalities	.722- .857	.564- .821	.863- .884	.760- .799	.653- .689

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

Kaiser-Meyer-Olkin Measure of Sampling Adequacy : .867

Bartlett's Test of Sphericity : Sig. = 000

Eigenvalue : above 1 (8.843, 2.123, 1.350, 1.212, 1.140)

Total Variance Explained : 77.203

Firstly, the first factor is Perceived Ease Of Use (PEOU). About six items were grouped with highest loading is for item "I find CAS easy to use" = 0.856, followed by "My interaction with CAS is clear and understandable", "I find CAS to be flexible to interact with", "I find it easy to get CAS to do what I want to do", "It is easy for me to become skillful at using CAS" and "Learning to operate CAS is easy for me". The factor loading for each item is between 0.718 to 0.856 with communalities between 0.722 to 0.857. According to Hair et. al (2010), the factor loading value greater than 0.5 are generally considered necessary for practical significance and should generally have communalities of greater than 0.50 in order to meet acceptable levels of explanation. Thus, this first factor can be considered necessary for practicality and have sufficient explanation.

Secondly, the results show that the factor loading for each item is between 0.642 to 0.790 for Perceived Usefulness (PU). The communalities show between .564-.821. The second factor has met the criteria of Hair et. al (2010) and can be considered practical significance and have sufficient explanation.

Thirdly, Attitude (ATT) contains two items that show factor loading for "All things considered, my using of CAS in my job is a(n)_ Extremely Negative to Extremely Positive idea" = 0.863 and "All things considered, my using of CAS in my job is a(n)_ Extremely Harmful to Extremely Beneficial_ idea" = 0.924. The communalities also show ranges between 0.863 to 0.884. This factor can be considered practical significance for this research with having sufficient explanation.

Fourth, three items represent for Behavior Intention (BI) which loading between 0.629 to 0.841. These three items ("I intend to use CAS for communicating financial information", "I intend to use CAS frequently in my job" and "I intend to use CAS in doing my job") can be considered sufficient explanation with the communalities more than 0.5 (between 0.760-0.799).

Last factor that produce is Actual Use (ACTUSE) which consist of "How many times do you believe you use CAS during a week?" = 0.740 and "How many hours do you believe you use CAS every week?" = 0.817. The communalities for these two items are ranged between 0.653 to 0.689.

Factor Analysis For Social Influence

The psychological attachment is measured in terms of compliance, identification and internalisation in the organisational commitment context. The Principal Component Analysis (PCA) with varimax rotation for the proposed construct of psychological attachment which produced two factors instead of three factors proposed by Kelman (1958). In Kelman (1958), the three items scale to measure identification, three items for internationalisation and four items scale in measuring compliance. After PCA has been implemented, all four items for compliance loaded, however, all items of identification and internalisation loaded together on another factor. In research done by Malhotra and Galetta (1999), O'Reilly, Chatman and Caldwell (1991) and Sutton and Harrison (1993), they also found only two factors in organisational commitment.

The Kaiser-Meyer-Olkin's (KMO) measure of sampling adequacy is 0.807 (Table 6). According to Tabachnick and Fidell (2007),

The KMO index ranges from 0 to 1, with 0.6 suggested as the minimum value for a good factor analysis. The rule of thumb for the Bartlett's Test of Sphericity should be significant ($p < .05$). In this study, the Bartlett's Test shows $p = .000$. From this result, factor analysis is appropriate to be implemented.

In the case of the Social Influence, the factor analysis yielded two factors with an eigenvalue greater than one. The emerging two factors are those that were expected conceptually and can be clearly identified as relating to the psychological attachment: compliance, identification and internalisation. Furthermore, using Kaiser's criterion, the rule of thumb is the study only interested factors that have an eigenvalue of 1 or more. From this study, there are two eigenvalue with values provided more than 1. These two factors explain a total of 68.813 percent of the variance.

Factor Analysis Of The Studied Constructs

Firstly, the first factor produced is the combination of internalisation and identification (IDIN). About six items were group together which the lowest loading is 0.508 for the item "I feel a sense of personal ownership about the use of CAS" and the highest is 0.857 for the item "I am proud about using CAS". This factor is consider practical significance due to the factor loading value greater than 0.5. This result is aligned with Malhotra and Galetta (1999) which the loading is between 0.669 to 0.839.

Second factor that produced is compliance (COMP) with loading between 0.793 and 0.895. Malhotra and Galetta (1999), the loading for this factor is between 0.562 and 0.791. According to Hair et. al (2010),

Table 6: Factor Loading For Social Influence

	Rotated Component Matrix	
	Component	
	1 (IDIN)	2 (COMP)
What the use of CAS stands for it is important for me	.634	
The reason I prefer use of CAS is because of the underlying organisational values	.848	
I like using CAS primarily based on the similarity of my values and the organisational values underlying its use	.851	
I feel a sense of personal ownership about the use of CAS	.508	
I talk up the use of CAS to my colleagues as a great use	.751	
I am proud about using CAS	.857	
My private views about use of CAS are different than those I express publicly		.855
Unless I'm rewarded for using CAS in some way, I see no reason to spend extra effort in using it.		.895
In order for me to get rewarded in my job, it is necessary to use CAS		.793
How hard I work on using CAS is directly linked to how much I am rewarded		.816

*Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .807
Bartlett's Test of Sphericity: Sig. = .000
Eigenvalue: above 1 (4.861,2.021)
Total Variance Explained: 68.813*

the factor loading value greater than 0.5 are generally considered necessary for practical significance. Thus, this factor can be considered practical significance and acceptable.

Technology Acceptance Model (TAM) with several variables were tested with strong instruments. This can be supported by Cronbach Alpha Value. Most of research adopted Davis, (1989) Davis et. al (1989), Matheison (1991), Moore and Benbasat (1991), Taylor & Todd (1995), Venkatesh &

Table 7 shows previous research done on

Table 7: Previous Research for Technology Acceptance Model (TAM)

Research Purposes	Factors and Cronbach Alpha Value	Authors
Develop and validate PU and PEOU	1. Perceived usefulness = 0.98 2. Perceived ease of use = 0.94 3. Self reported system usage	Davis (1989)
Predict people's computer acceptance from a measure of their intention and explain intention	1. Perceived usefulness = 0.97 2. Perceived ease of use = 0.91 3. Subjective norms = single item 4. Intention to use = 0.90 5. Attitude = 0.82	Davis et al. (1989)
System characteristics, user perception and behavioural impacts	1. Perceived usefulness = 0.97 2. Perceived ease of use = 0.91 3. Attitude toward using = 0.96 4. Actual system use = 0.70 5. System design features	Davis (1993)
Validate factors on TAM and propose construct on Physiological Attachment	1. Perceived usefulness = .960 2. Perceived ease of use = .961 3. Internalization + Identification = .8690 4. Compliance = .7043 5. Attitude = .899 6. Behavioural intention = .832 7. Actual use	Malhotra and Galletta (1999)
Determining the extent to which an innovation is adopted	1. Perceived ease of use = 0.73 2. Perceived usefulness = 0.84 3. Attitude (insecurity emotions) = 0.76 4. Attitude (positive emotions) = 0.75 5. Extent to use	McKechnie, Winklhofer, & Ennew (2006).
Examine students' perceptions and their acceptance towards implementing a laptop program.	1. Perceived ease of use = 0.981 2. Perceived usefulness = 0.971 3. Perceived requirements = new factor 4. Perceived change = new factor 5. Acceptance	Elwood, Changchit, & Cutshall, (2006)
Analyse the acceptance of business management software by focusing on high-tech firms dedicated to information technologies and belonging to the service sector (IT high-tech firms).	1. Ease of use = 0.766 2. Usefulness = 0.787 3. Basic technologies = 0.904 4. Intensity of use = 0.779 5. Complex technologies = 0.867 6. Web procurement = single 7. Intention to use = single item	Hernandez, Jimenez & Martin. (2010)

Extend technology acceptance model (TAM) to suit in a developing country context	<ol style="list-style-type: none"> 1. Subjective norms = 0.6724 2. Perceived ease of use = 0.7712 3. Perceived usefulness = 0.7752 4. Government support = 0.7507 5. Institute support = 0.7492 6. Behavioural intention = 0.7296 7. Behavioural usage = 0.7051 	Muhammad Sharif, Fida, Abdul Fatah, Farwa. (2011)
Investigate the adoption of innovation management applications (IMAs)	<ol style="list-style-type: none"> 1. System compatibility = 0.90 2. Perceived ease of use = 0.87 3. Perceived usefulness = 0.94 4. Need for interaction = 0.77 5. Attitude = 0.96 6. Innovation process performance = 0.95 7. Intention to use = single item 	Plewa, Troshani, Francis & Rampersad. (2012)
Develop and Revising technology acceptance model (TAM)- Conceptual Framework	<ol style="list-style-type: none"> 1. Long-term usefulness 2. Near-term usefulness 3. Perceived ease of use 4. Attitude 5. Behavioural intention 6. Technology Complexity 7. Individual Differences 8. Facilitating Conditions 9. Social Influences 10. Wireless Trust Environment 	Lu, Yu, Liu, & Yao. (2003)
Proposed a model to explain how new customers of a web-based company develop initial trust in the company after their first visit. The model is empirically tested using a questionnaire-based field study.	<ol style="list-style-type: none"> 1. Perceived willingness to customise = 0.787 2. Perceived reputation = 0.823 3. Perceived usefulness = 0.929 4. Perceived ease of use = 0.896 5. Perceived security control = 0.823 6. Trust Propensity = 0.833 7. Initial Trust = 0.865 	Koufaris, & Hampton-Sosa (2004)
Examines antecedents to consumer adoption of a popular form of online entertainment – fantasy sports leagues	<ol style="list-style-type: none"> 1. Perceived ease of use = 0.86 2. Perceived knowledge = 0.97 3. Subjective norms = 0.98 4. Attitude towards Television Sport 5. Intention = 0.98 6. Attitude towards Technology System = 0.96 	Kwak, & McDaniel (2011)
Examine the determinants of online community user participation from a social influence perspective.	<ol style="list-style-type: none"> 1. Subjective norm = 0.78 2. Group norm = 0.85 3. Cognitive social identity = 0.78 4. Evaluative social identity = 0.78 5. Affective social identity = 0.75 6. Participation intention = 0.88 7. Participation behavior = 0.91 	Tao Zhou (2011)

Determining the level of users' acceptance of the electronic banking services and investigating the factors that determine users' behavioral intentions to use electronic banking systems in Nigeria	<ol style="list-style-type: none"> 1. Computer Self efficacy = 0.752 2. Perceived Credibility = 0.726 3. Perceived ease of use = 0.877 4. Perceived usefulness = 0.910 5. Customer attitude = 0.744 6. Behaviour intention = 0.752 	Aderonke & Charles (2010)
The decision to use an online social network is conceptualized as intentional social action and the relative impact of the three modes of social influence processes (compliance, internalization, and identification) on intentional social action to use (collective intention) is examined.	<ol style="list-style-type: none"> 1. Intention = 0.97 2. Compliance (subjective norm) = 0.88 3. Internalization (group norm) = 0.78 4. Cognitive social identity = 0.90 5. Evaluative social identity = 0.90 6. Affective social identity = 0.90 	Cheung & Lee (2010)

Davis (1996) and Kelman (1958).

Reliability Analysis For Technology Acceptance Model (TAM)

Table 8: Reliability Analysis for Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM)	Cronbach Alpha Value
Perceived Ease Of Use (PEOU)	.936
Perceived Usefulness (PU)	.918
Attitude (ATT)	.856
Behavior Intention (BI)	.781
Actual Use (ACTUSE)	.533

Table 8 shows the Cronbach's Alpha for Technology Acceptance Model (TAM) to test the quality of the measurement. Most of the Cronbach Alpha shows more than .70 which indicates that this instrument items and scales produce reliable and robust results due to the rule of thumb developed by Hair *et al.*(2010) and Sekaran (2000). They stated if Cronbach Alpha of more than 0.7 can be considered acceptable.

The closer the Cronbach Alpha coefficient gets to 1.0, the better the results of reliability will be. Reliabilities that are less than 0.6 are considered to be poor, those in the 0.7 ranges, acceptable, and those 0.8 are good (Sekaran, 2000). In current study, the study can be considered as good for PEOU, PU, and ATT because each Cronbach Alpha shows more than 0.8. Next, the Cronbach Alpha for BI is indicated acceptable because more than 0.7. However, Cronbach Alpha shows 0.533 for ACTUSE which indicated poor due to more than 0.5.

Reliability Analysis For Social Influence

Table 9: Reliability Analysis for Social Influence

Social Influence	Cronbach Alpha Value
Internalisation and Identification (IDIN)	.861
Compliance (COMP)	.883

Table 9 shows the Cronbach's Alpha for Social Influence. This result can be

considered good and sufficient instruments to be use in research. Furthermore, the results can be compared with Malhotra and Galletta (1999) and Cheung & Lee (2010). However, the first factor, an alpha of 0.91 (IDIN) and 0.54 for second factor (COMP) in Sutton and Harrison (1993).

Discussion And Conclusion

This paper revises and validates instruments (i.e. Perceived Ease Of Use (PEOU), Perceived Usefulness (PU), Attitude (ATT), Behavior Intention (BI) and Actual Use (ACTUSE) for measuring Technology Acceptance Model (TAM) of Computerised Accounting System (CAS) in Computerised Accounting System (CAS) particularly in Accountant General's Department (AG).

Descriptive analysis and factor analysis were employed in this study to measure and validate the Technology Acceptance Model (TAM) factors contributing to actual usage. After examination the data by means of factor analysis, five factors (i.e. Perceived Ease Of Use (PEOU), Perceived Usefulness (PU), Attitude (ATT), Behavior Intention (BI) and Actual Use (ACTUSE)) towards computerised accounting system were extracted with the loadings exceed 0.50 and eigenvalues of more than 1.0.

Firstly, the first factor is Perceived Ease Of Use (PEOU). About six items were grouped with highest loading is for item "I find CAS easy to use" = 0.856, followed by "My interaction with CAS is clear and understandable", "I find CAS to be flexible to interact with", "I find it easy to get CAS to do what I want to do", "It is easy for me to become skilful at using CAS" and "Learning to operate CAS is easy for me". Secondly, the results show that the factor loading

for each item is between 0.642 to 0.790 for Perceived Usefulness (PU). Thirdly, Attitude (ATT) contains two items that show factor loading for "All things considered, my using of CAS in my job is a(n)_ Extremely Negative to Extremely Positive_ idea" = 0.863 and "All things considered, my using of CAS in my job is a(n)_ Extremely Harmful to Extremely Beneficial_ idea" = 0.924. Fourth, three items represent for Behavior Intention (BI) which loading between 0.629 to 0.841. These three items ("I intend to use CAS for communicating financial information", "I intend to use CAS frequently in my job" and "I intend to use CAS in doing my job") can be considered sufficient explanation with the communalities more than 0.5 (between 0.760-0.799). Last factor that produce is Actual Use (ACTUSE) which consist of "How many times do you believe you use CAS during a week?" = 0.740 and "How many hours do you believe you use CAS every week?" = 0.817. In determining the level of reliabilities, the study can be considered as good for PEOU, PU, and ATT because each Cronbach Alpha shows more than 0.8. Next, the Cronbach Alpha for BI is indicated acceptable because more than 0.7. However, Cronbach Alpha shows 0.533 for ACTUSE which indicated poor due to more than 0.5.

Furthermore, the study also measure and validate the Social Influence called as Psychological Attachment factors contributing to actual usage. After examination the data by means of factor analysis, two factors (i.e. Internalisation and Identification (IDIN) and Compliance (COMP)) towards computerised accounting system were extracted with the loadings exceed 0.50 and eigenvalues of more than 1.0. Firstly, the first factor produced

is the combination of internalisation and identification (IDIN). About six items were group together which the lowest loading is 0.508 for the item "I feel a sense of personal ownership about the use of CAS" and the highest is 0.857 for the item "I am proud about using CAS". Second factor that produced is compliance (COMP) with loading between 0.793 and 0.895.

Overall, the finding of this study verifies that a revised instrument with some changes to the TAM and Psychological Attachment instruments is still valid in measuring intention and actual usage. The factors of Technology Acceptance Model (TAM) and Psychological Attachment is valid in measuring intention and actual usage of Computerised Accounting System (CAS). The findings support the theory by Davis, (1989) Davis et. al (1989), Matheison (1991), Moore and Benbasat (1991), Taylor & Todd (1995), Venkatesh & Davis (1996) and Kelman (1958).

This research is limited to employees from Accountant General's Department (AG) as Federal Government. In future, research need to generalised to Local Government and State Government in order to represent Public Sector Accounting. This research have been emphasised on perceived ease of use, perceived usefulness, behavioural intention, actual use, attitude toward using, compliance, identification as well as internalisation. This research need to be done in order to understand the important of Computerised Accounting System (CAS) in public sector accounting since Accountant General's Department (AG) is in progress preparing for accrual basis.

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Manuscript Preparation Guidelines

Typing

Manuscripts should be typed double-spaced on only one side of the paper.

Title Page

Include a separate title page with the title of the manuscript, author's name, affiliation, address, phone number, fax number and email. All correspondence will be directed only to the first author.

Abstract

An abstract of 150 to 200 words outlines the purpose, scope and conclusions of the manuscript as well as five selected keywords. If the manuscript is written in Bahasa Malaysia, an abstract in English should be provided.

Figures and Tables

All figures (charts, graphs, drawings etc) and tables should be titled and numbered. Figures and Tables should supplement the text and not duplicate it. Here are some examples:

Figure 2.5 Evolution of Training's Role

Source: Noe, RA 2005, *Employee Training and Development*, p.41.

Table 6.20 Fit Indices for Hypothesised Structural Model

Appendices

Use a separate page for appendices (if required). Provide each appendix with a title.

Reference Citations

Use author-date method. Here are some examples:

If one author:

Laker (1990) proposed

If two authors:

Broad and Newstrom (1992) also noted that

If two or more works cited at the end of the text:

Transfer of training is generally defined as the degree to which trainees apply the knowledge, skills and attitudes gained in training to their job (Ford & Weissbein 1997; Tannenbaum & Yulk 1992; Wexley & Latham 1991).

If more than two authors and their work is again cited in the text, use 'et al.'. For example,

First citation in text:

For instance, Tziner, Haccoun and Kadish (1991) noted that the fundamental purpose of training is to help people develop skills and abilities which, when applied at work, will enhance their average job performance in their current job.

Subsequent citation in text:

The definition provided by Tziner et al. (1991) links the acquisition of knowledge and skills gained through training to an application in the workplace.

Reference List

All references in the reference list must be cited in text and should be arranged in an alphabetical order. Here are some examples:

Books

Cohen, JW 1988, *Statistical power analysis for the behavioural sciences*, 2nd edn,
Lawrence Erlbaum Associates, Hillsdale, NJ.

Cormier, SM & Hagman, J 1987, *Transfer of learning: contemporary research and applications*, Academic Press Inc, London.

Book Chapters

Kozlowski, SW & Salas, E 1997, 'An organisational systems approach for the implementation and transfer of training', in Ford, JK., Kozlowski, SW., Kraiger, K., Salas, E & Teachout, MS (eds), *Improving training effectiveness in work organisation* (pp.247-87), Lawrence Erlbaum, New Jersey

Encyclopaedia

Tuijnman, AC (ed.) 1996, *International Encyclopaedia of Adult Education and Training*, Pergamon, NY

Journals

Bates, RA 2001, 'Public sector training participation: an empirical investigation', *International Journal of Training and Development*, vol.5, no.2, pp.136-152

Connelly, CE & Kelloway, EK 2003, 'Predictors of employees' perceptions of knowledge sharing cultures', *Leadership & Organisation Development Journal*, vol.24, no.5, pp.294-301.

Colquitt, JA., LePine, JA & Noe, RA 2000, 'Toward an integrative theory of training motivation: a meta-analytic path analysis of 20 years of research', *Journal of Applied Psychology*, vol.85, pp.679-707

Internet

Ahmad Badawi, A 2006, 'Strengthening resilience, meeting challenges', The 2006 Budget Speech, viewed 20 February 2007, <http://www.treasury.gov.my/index.php?ch=12&lang=eng>

Proceedings

Bates, RA & Holton, EF III 1999, 'Learning transfer in a social service agency: test of an expectancy model of motivation', in KP Kuchinke (eds.), *Academy of Human Resource Development 1999 Conference Proceedings* (pp.1092-1099), Academy of Human Resource Development, Baton Rouge, LA.).

Dissertation

Chen, CH 2003, *Cross cultural construct validation of the learning transfer system inventory in Taiwan*, Unpublished Doctoral Dissertation, Louisiana State University.









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