

The Future of Accounting and Corporate Reporting – A View from the IT Perspective

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Abstract

Advancement in Information Technology is expected to be an important factor to determine the future of accounting and reporting. Most of the available studies have focused on technology as the important factor that will affect the future of accounting and the reporting. This paper develops a general framework to predict the future of accounting and reporting by combining four elements - limitations of technology, readiness of the accountants and the accounting firms, specific changes of the accountants and the accounting firms, and other factors. Although predicting a dynamic future is challenging, this paper aims to give a guide map that can help accountants and the accounting firms to navigate the future successfully.

Key words: IT and accounting, accounting and reporting, future of accounting, technology and reporting

INTRODUCTION

In the past, accountants would manually collect financial data from their clients to prepare financial reports on paper. Normally, the data had been taken are not up-to-date (a year before). The working environment of the accountants of the past can be considered as the “offline environment”. Moreover, the only role of accountants of the past can said that is “the producer of the financial reports” to their clients. With the advancement of the technology, the working environment of the accountants is switching to the real-time environment. It is undeniable that, with the assistance of the technology tools like Internet, the accountants can do their works more efficiently, and conveniently. For example, the accountants can use software to prepare the financial reports in the shorter period. This is because there are lots of automated functions in the software which will save the time. Simultaneously, the roles of the accountants will be diversified with the explosive growth of the technology. Accountants will not just ‘simply be accountants’ anymore. They have to diversify into other roles such as consultants, financial planners, and financial analyzers.

The question that fascinates the attention of researchers in this area is whether the accounting firms are ready to face the different challenges in the future? It is irrefutable that the accountants will gain lots of the benefits from the improvement of the technology. But, at the same time, they have to face lots of the different challenges especially from the traditional accountings firms. Most of the conventional accounting firms’ business operations are in paper format. If they want to switch into the real-time environment, vast budgets are needed for reengineering their business processes. They have to spend money for purchasing the new computer and software and setting up the Internet connection. Besides that, they have to allocate more time and money to train their staff including the accountants to do their jobs with the aid of the technology. If the firms implement the conventional way to manage their business, will the firms still be able to maintain their competitive advantage while the other accounting firms are already operating in the real-time environment?

How about the accountants? Are they ready to face the challenges? Till recently, accountants concentrated on their auditing or calculation tasks. In future, they have to play different roles in their jobs. They have to improve their communication skills. This is because they have to interact more with their clients. For instance, they have to analyze the client’s company financial situation. Moreover, they have to enhance their knowledge of the Information Technology (IT) in order to simplify their tasks. Fear for security of information leads people to trust tangible financial reports (paper-based) than Internet reporting. Thus, accountants face the difficulty to convince the clients on the Internet reporting or online reporting.

This paper reviews the recent literature in accounting and attempt to predict the future of the accounting and reporting with the information technology framework. This paper also aims to assess readiness of accountants to face the challenges of the future in view of the many factors that come into play, such as preparedness of accountants to adapt in the real-time environment and lack of awareness on the limitations of technology with regard to accounting and reporting.

OBJECTIVE OF THE RESEARCH

1. To determine the readiness of the accountants on facing the new challenges.
2. To suggest specific changes which the accountants and the organizations have to make for ensuring their continued survival in a dynamic environment.
3. To identify the limitations of the technology on the accounting and reporting.
4. To identify any other factors which may affect the future of the accounting and reporting.

SURVEY OF LITERATURE

The survey of literature has been categorized into future of the accounting (technology), the future of the accounting (other factors), the future of the financial reporting and the future of the corporate reporting.

The future of the accounting (technology)

McPhail, K., & Ferguson, J. (2016) drew attention to the development of business and human rights reporting and assurance practice along with an intensive research in this significant and emerging field. Barry Cooper (2002) provided the overview of the attributes of the accountants of the future. He had used numbers of reports by the various accounting bodies to elaborate more on the drivers of change that will impact the role of the accountant in the future. The example of reports had been used are "Added Value Professionals-Chartered Accountants in 2005" by the Institute of Chartered Accountants of England and Wales (ICAEW) and "The Elliot Report" by the American Institute of CPAs (AICPA). The drivers of change are including the global economy, information technology, the empowered consumers and the others. In future, the accountant will meet a lot of challenges from tax agents, business advisors, unqualified accountants, financial planner and various consultants. To overcome this challenge, the author had suggested that the accountants need to capitalize on traditional strength, through migrating to higher value-added activities, developing broader skills and being committed to lifelong learning.

The technology will increasingly affect the accountants' traditional taxation work by making it more specialized. In the commerce and industry field, the accountant of the future will have an opportunity to become the business advisor of the organizations. To be able to do it, they will need to diversify their skills into different areas such as information technology, non-financial performance measurement and general management. The ICAEW report observed that the broad skills of accountants are making them ideally placed to provide management consultancy services such as e-business advice and knowledge management.

Jeacle, I., & Carter, C. (2014) identified three new creative spaces of scholarly research namely the media space, the virtual space and popular culture space. Zabihollah et al (2001) are discussing about how the advancement of the technology will affect the future of accounting. With the emerging of the technology, it had changed the business practices. Simultaneously, it also altered the process of recording and reporting the business transactions. Extensible Business Reporting Language (XBRL) had gained popularity among the financial institutions and also the accounting firms. The authors defined XBRL is 'a standardized electronic language for business reporting which facilitates the preparation, publication, examination, and extraction of financial information. XBRL will reduce repeatable financial reporting processes.

Vera-Muñoz, S. C. (2015) stressed the introduction of an audit judgment rule on accounting estimates in the post-Sarbanes-Oxley environment. Chandra Bhansali (2005) pointed out some criteria of the successful accounting firms. There are many accountants earned their livelihood by analyzing historical data. Unfortunately, there are very less of them realized that the accountants must adapt themselves to the evolution of the technology every decade. In 1960s, it was calculator. In 1970s, it was based-taxed service bureaus. Then, in 1980s, it was DOS PC's. Window is appearing in 1990s. In the 21st century, the latest technology is the Internet. The Internet was bringing the difference changes for the accountant than any previous technology. With the Internet, the accountant can work from anywhere and anytime they want. Moreover, Internet allows the accountants to interact and cooperate with the clients in any locations. There are many mistakes had been made by the accounting firms in the past. They were not response spontaneously on the impact of the new technologies on their practices.

Bennett, M., & James, P. (Eds.). (2017) highlighted the need for providing more financial information to meet the increasing demand by external stakeholders. Thomas (2001) discussed about the future of accounting with the adoption of the Web-based system. In future, the accounting firms will act similar as the business consulting firms. Through the Web-based system, the accounting firms are still continued to provide such vital services such as report generation, tax preparation and auditing. Nevertheless, with the real-time connectivity through the Web-based system, this will allow the accountants to accomplish their tasks in the shorter period of time. Moreover, this will allow accountants to spend more time on the strategic tasks like financial analysis and business consulting. This also will increase both their value to client and their billings for high-revenue services. The author also stated that 'real-time, anytime/anywhere access will also allow accountants to provide faster, more responsive services to their clients, no matter where they or their clients are located'.

The Future of the Accounting (Other factors)

Brian Hamilton (2005) analyzed the future of accounting from the perspective of data accuracy. Accounting is not only to aggregate the data and report. It should provide a better framework for making financial and management decisions. Currently, the financial data is not just simply the data or the figures. Instead, it plays a role of helping people to make the better financial decisions. Therefore, the accounting firms of the future have to provide accurate financial data to clients. In addition, the accountants have to help the clients to understand the data. This is because it will help them to make the better financial decisions. In other words, the accountants of the future will not only be the financial information producer, but also the financial analyzer. Since the accountants have to analyze the financial data to the clients, it is very imperative that they can understand their clients better. After the clients understand the financial data, it will help them to 'increase financial literacy and success for clients'. Lack of knowledge around the basic financial concepts may lead to failure of one business.

Roger Ochs (2004) provided the overview of the effects of clients on the future of the accounting. The author had mentioned that 'the client relationship management will be the cornerstone of the accounting firm of the future. This means that the client relationship management will be one of the important key to indicate the accounting firms of future is success or not. With the advancement of the information and technology nowadays, the things which sought by the clients are different from the past. The clients will seek advice from the professional who can help them to interpret the massive information. And then, they also hope that the professional can help them to find a solution that can reach their financial goals. The author had said that 'successful firms will focus on building a history with the clients rather than reporting history activity'.

Steven M.H. Wallman (1996) discussed about the future of accounting by focusing on the reliability and auditor independence. The auditor independence is really important for the reliability of the accounting information. Due to that, the author argued that 'the current paradigm for assessing independence issues needs to be made both more comprehensive and more comprehensive in order to advance the public interest'. The current approach is not encouraged the development of better concepts. It is also both under- and over-inclusive. It is under-inclusive because it is not related to the practice of the auditing activities such as tax advising with an adequate attention. It is over-inclusive because it is involving the activities may cause the inconsistency with auditor independence without any convincing analysis. Moreover, 'it precludes activities that might benefit the public interest by limiting an auditor's learning about its clients, thereby making better audits less likely'. The rules that implement the current approach also lack of a clear rationality. As a result, it is difficult to interpret both the model and rules in the business environment.

The Future of Financial Reporting

Mike Wills (2000) focused his discussions on the Extensible Business Reporting Language (XBRL). The development of the XBRL can be considered as the collaboration development. This is because there is the consortium of the companies had the same purpose to develop an Internet-based language for business reporting. There are many advantages of the XBRL usage. It can reduce the time and cost of accessing the information. It is also will condense the cost and time of the preparation of the financial statements. In addition, it allows more users to access or see the financial statements. The enhancement of the statement's analysis is also one of the benefits of the XBRL usage. The XBRL will not eliminate the Certified Public Accountant (CPA). Instead, it will allow the CPA prepares the financial statements more efficiently.

Robert Hodgkinson (2003) provided the overview of the principle-based guidance from the Institute of Chartered Accountants in England and Wales, which is aimed at assisting directors of British companies in the preparation and publication of prospective financial information (PFI). High-quality information is really important to the markets. It is not only can improve the overall quality of published PFI, but also it can encourage the company to become more challenging in their disclosure. The author defined PFI as 'financial-information drawn up to a date in the future, including market reporting such as profit forecasts, change in the expectations and estimations of the future funding requirements. Historically, the conceptual framework of accounting is focusing on the historical financial information. With the three principles in the PFI, the framework will be more advance in its usage. The three principles are the reasonable disclosures, business analysis and subsequent disclosure.

Greg Zegarowski (2003) reviewed the report card on the current financial reporting. From the report card, it showed that there is the mixed picture of achievement on the quality of the financial reporting. But, from most of the recent business scandals, there are lots of criticisms on the existing financial reporting. The governance failures and flagrant executive fraud are the two major factors that had caused most the business scandals occurred. Furthermore, the key executives also need to absorb plenty of the blames. Therefore, the overall financial reporting system is needed to be improved. It is not only the individual investors but also the economy is also needed to improve.

Ettredge et al. (2002) reviewed about the timely reporting at the corporate websites. The rapid evolution of the Internet technology had transforming the custom paper-based financial reports to the web-based financial reports. To maintain the competitive advantage of the company, more and more companies have their companies' financial information online. There is the need that the company to adopt the real-time or timely-reporting in the future. The corporate web-sites had increasing the accessing of the information. There is a study showed the larger company is more likely to maintain their websites. Furthermore, most of the companies updated their annual report or the financial information quite lagged. The number of shareholders and the number of analysts that follow the company are intended to capture the relative level of demand for a firm's information maybe is the reason that causing the lag of the updating. If more individual shareholder represents an increased demand for Web site financial data, it is expected that it can be shorten the lag of the updating.

The Future of Corporate Reporting

Iqbal Khadaroo (2005) examined the implications of the corporate reporting on the Internet for the auditing profession. Nowadays, there are more and more companies disclose their financial information on the Internet. Therefore, it had created lots of opportunities and challenges for the accounting, auditing profession and regulators. The conventional flow of accounting, auditing and accountability information to various interest groups had changed. This is because of the Internet. Financial Accounting Standard Board (2000) had mentioned that "the phenomenal growth in the supply of Internet information is primarily attributable to the fact that, companies can provide more information at the lower cost on their web sites; the Internet enables them to diverse and disperse consumers from the information". From the demand perspective, it is found out that the investors and other interest groups can access more information at the lower cost. There are two significant factors that the company should concern when they update information on their company's website.

Alan Anderson (2005) had given some of his opinions about the business reporting model of the future. He defined "the business reporting model of the future is online, real-time disclosure and also performance measurement based". Due to the increasing demand for more relevant and up-to-date information, the existing business reporting is considered incomplete. The data using technology format will allow the stakeholder to access and analyze the data quickly. It will help them to make better decisions. There are five fundamental elements of the reliable online and real-time reporting. The first element is the 'reliable system'. Next, it is the 'common method of disseminating information'. The third element is the 'industry specific financial and non-financial data. Next, it is the 'corporate accountability, including management integrity and solid enterprise risk management'. The last element is the 'understandable disclosures'. For example, XBRL technology can be used to facilitate the common methods of disseminating information. The accountant must ensure the timely business information is reliable. The periodic and historical financial statements are cannot to be used for making the real-time decisions. This is because they are recorded the transactions, the financial activities which are happened at least 30 days ago. It is only presenting the snapshot of the companies' financial situation to the investors, analysts and regulators.

Ronan Murphy (2004) discussed about the future of the corporate reporting. Recently, there are lots of cases such as financial fraud, accounting irregularities and business failures in the corporate and investing fields had been reported. Consequently, many innocent people lost their jobs and money just because of they worked for the companies that involved in those cases had been mentioned. The challenge now is what the ways can be taken to ensure the public trust can continue to exist. There are three key elements of building confidence in corporate governance and corporate reporting. The first key element is the spirit of transparency. The board of directors is the key persons to decide the level of appropriate transparency of the company. Mostly, the management level is unable to understand the information needs of its stakeholder. As a result, the company is lacking of the transparency. Nowadays, the stakeholder is looking for higher level of transparency. This is because it can create and protect the value. The next key element is the culture of accountability.

McGuigan, N., & Kern, T. (2016) advised educators to focus on creativity and innovation of future accounting by exploring pedagogical process of unlearning in accounting curricula, a dynamic, engaging, and creative space for learners and educators to support a critical and reflective culture for students and teachers. Robert Pinsker (2003) attempted to alert the auditors and the accountant about the benefits of the Extensible Business Reporting Language (XBRL). XBRL is a digital language that "tags" information for business reporting. It is understandable by both human and computer. The standardized information will increase the efficiency of the internal and external auditor's jobs. In Hypertext Markup Language (HTML), the information is easy to present on Internet, but it is not manipulated by its users. In contrast, XBRL is not only presenting information easily on the Internet, but also it can be manipulated. In addition, XBRL encourages the interoperability of different users through many technologies. The author had stated that 'large interoperability and efficiency gains can be achieved by many users of company financial information if XBRL is used. For external auditors, the XBRL can make the auditing process faster. But, they are required to know about the XBRL.

RESEARCH METHODOLOGY

A research framework is developed in Figure 1 as the following page based on secondary data:-

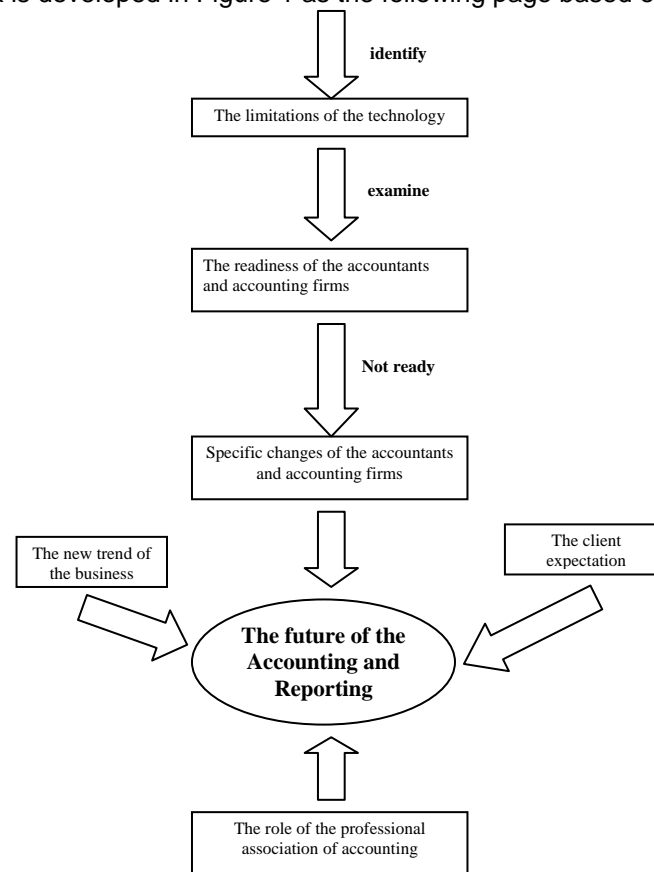


Figure1: Research Framework

DISCUSSIONS, ANALYSIS AND FINDINGS

Technology

Before the invention of the information technology, most of the activities were done manually and it normally took the long time to accomplish one task. The tasks of the accounting and reporting are also unavoidable for all of these. For the past, people had to prepare the accounting statements and the reports by writing it with the pen or pencil on a piece of the paper or a ledger. After that, people can use the typewriter to type the accounting statements and the reports. Then, with the appearance of the computers, the method of preparing accounting statements and reports had been evolved again. Consequently, the Internet was popularized during the early of the 90s. The invention of the Internet had brought many changes in the lifestyle, the way of the communications, the way of doing the business (E-commerce). For the accounting and the reporting fields, there is the implementation of the Internet reporting. It is no doubt that because of the advancement of the technology, the future of the accounting and reporting will gain lots of the benefits from the time and convenient aspects. But, there are lots of the limitation of the technology will affect the future of the accounting and the reporting.

The limitations of the technology

i) Security

There are lots of the benefits which we can gain from the computers and also the Internet. However, the computer and the Internet are also having some weaknesses or pitfalls. The security issues of the computer and the Internet are always the threat to their users. Security problems continue to occur from day to day although there are many preventive methods like antivirus software, firewall and so on. Moreover, after the old security problems had been solved, the new security problem will appear very soon.

One of the security issues is the physical security problems of the computers and the Internet. The example of the physical security problems are viruses, worms and Trojan Horses. What are viruses, worms and Trojan Horses did normally? How there are created?

One of the well-known security problems was the MillenniumY2K bugs. During the late of 90s, some computer professionals realized that the computer system may face some problems when the year 2000 was

reaching. This is because they are worried that the date function in the computers was unable to switch to the year 2000. As a result, there are lots of the money have been spent to do some testing of the computer systems with the purpose of search the remedies and preventive methods. For the organizations or the firms, they had spent lots of the money to backup their significant data. But, when the year 2000 reached, the Millennium Y2K bugs was not happen and all the computers were remains operating properly. Consequently, all the money had been spent for the bug was the wastage.

a) Privacy

For the accounting firms, there are lots of the significant data in the accounting statements and the reports. In addition, most of these data are the client's and company's data. Since there are client's data, most of the clients will not want the third parties who are able to obtain their data easily. Any disclosure of the critical data of the clients will violate their personal and also the organizations privacy. Thus, avoidance of the violation of the client's privacy is that crucial to the firms. The accounting firms (Computer-based system or Web-based system) had to spend money for the preventive methods such as installations of the firewalls. Unfortunately, most of the firms are not willing to spend lots of the money on the computer security because they think those money will be better used for the other purposes like investments. Consequently, they will spend as minimum monetary as possible in the computer security. For the medium-size firms, they may even ignore the security issues.

Since many accounting firms do not have the better security system for protecting their data, it is very easier for the computer hacker to attack the computer systems. For instance, some people or organizations have intention to know the details of their competitor's company; they can hire the computer hacker to hack the related accounting firm's system to obtain the data they want easily. The violation of the company's privacy would be the serious problem in the future if the accounting firm remains not focus more attention on the security.

b) Authentication and Authorized access

In future, it is strongly believed that there are many accounting firms will deliver their services through the Internet. In addition, most of their businesses will not only restraint to the local area only. It is highly possible that they will have many clients from oversea. The Internet will be the significant tools for the firms to interact and communicate with the clients from oversea. Since the whole interaction processes are faceless, it is difficult to authenticate the identity of the firms and also clients. It is very low-barrier to enter the E-commerce marketplace. Some organizations may create the counterfeit online accounting firms to acquire the information they want or to gain more money. For the clients, they may be not used their fake identity while they are consuming the services.

Normally, there are some critical portions of the clients' information in the accounting statements and the reports. These portions should be only allowed some people of the accounting firms to access it. Therefore, there should have one centralized system in the firms to control the access right of every staffs in the company. It is not easy to implement it. Moreover, some computer professionals are able to hack the centralized system to gain the right to access the confidential information and then sell the information to the third party. The unauthorized access to these clients' confidential information will cause the big loss to their company. If this was happened, it will affect the clients' loyalty to the accounting firms.

c) Integrity and non-repudiation

Besides that, the information which provided by the clients are also hard to determine its accuracy. The clients can provide the related information to the accounting firms conveniently through the Internet. The accounting firms can receive the information simultaneously and complete the tasks in the very short period of the time. Unfortunately, there is no any effective method or way can guarantee that the related information had been provided are 100% accurate. The clients may provide the inaccurate information to the firms for reducing the taxes which they should pay. Moreover, it is possible that the third parties had modified the data during the process of the delivering information to the firms. As a consequent, the firms or the clients are not receiving the accurate data. The financial statements or the related reports had been prepared also would be not that accurate.

Besides that, it is not that easy to prove the related information which had sent by the clients to the firms or vice-versa. They may claim that they never sent the related information to the recipient. Moreover, all of these interactions are faceless interaction. If any problems or mistakes in the accounting statements or reports because of the inaccurate data, the accountants mostly will say that they just prepare the statements or reports based on the information which had been given by the clients. In the same time, the clients may claim that they were never providing such information to the firms. As a result, it is hard to determine either the firms or the clients have to accountable for the mistakes in the accounting statements.

The technology would provide greater opportunity for the organizations or individuals to involve in the illegal activities such as reducing their payable tax through providing not accurate financial information.

ii) High cost for business reengineering

There are some established accountings firms in the world are achieving a great success after their business reengineering process by the implementation of the technology. It is unforgettable that there are still have many medium-sizes or even smaller-sizes accounting firms. Most of these types of the accounting firms are managing their business in the conventional ways. The conventional ways means that their firms are not be facilitated by the computers, they are preparing the accounting statements and reports manually. Furthermore, the accountants or staffs of these firms are non-computer literature. They were already ensemble themselves with the custom ways which they are used for accomplishing their tasks. And then, these kinds of the firms commonly not have the strong financial resources.

If the conventional medium-size or smaller sizes accounting firms want to transform to the computer-based or Internet-based firms, the whole business processes have to be reengineered. Firstly, they have to buy purchase of the computer equipments such as CPU, monitors, printers and so on. Next, they may be needed to buy some new tables for allocating those computer equipments. Moreover, the computers had to be facilitated by the Internet equipments like network cards and network cables. For getting the Internet connections services, they have to subscribe with the Internet Service Provider (ISP). Consequently, the firms have to allocate lots of the budgets on the computer facilities.

The computers are only the dumb terminals if the computers are not installed with the different applications. So, the firms have to spend money for buying different applications such as Microsoft Windows, Microsoft Office and some accounting-packages applications. Usually, the end-user licenses of the established software company are that expensive, around hundreds to thousands for one end-user licenses. As stated previously, most of the staffs of the conventional firms are still non-computer literature. Therefore, the firms have to allocate some budgets for providing training courses to their staffs. Then, to overcome the security problems, the companies have to allocate some money for the better security system. After sum up all the costs, it is very huge figures of money for one conventional middle-sizes firm or the small-sizes firm. Moreover, it is not guarantee that the firms can gain more profits after making such business processes reengineering. The change may only improve the efficiencies of the works and reduce the time for accomplishing the tasks.

Consequently, the conventional medium-size firms or smaller-size firms are facing the difficult situation for making the decision. The decision is referring to either the firms will continue to maintain current business processes or the firms will spend lots of money for the business reengineering. If the firms decide to continue their operations without any change, the firms mostly would feel difficult to continue their business because of the challenges from the established firms. If the firms decide to reengineer their business processes, then they maybe will face the long-term debts from the financial institutions. This is because they would make the loan from the financial institutions to get the financial funds for reengineering their business. So, if they may face a bankruptcy if they are unable to pay the debt.

As a result, the advancement of the technology would be the possible threat to the conventional medium-size accounting firms or smaller-size accounting firms in the future if they are not taking any proper steps.

iii) The instability positions of the Accountants

For the past, the one who able to understand and analyze the financial statements is the one is knowledgeable about the accounting. Moreover, only the accountants are very clear about the accounting statements format, reports format and taxation system of the country. Most of the clients are also not having much knowledge about the accounting. Therefore, in the past, the role of the accountant is that significant to help the clients for preparing the accounting statements, reports and the income tax form.

Currently, with the assistance of the technology, the tasks of preparing accounting statements and the reports take shorter time to accomplish them. And then, the accountants also can easily prepare the accounting statements and the reports. This is because there are lots of user-friendly accounting-software package in the markets. These types of the software normally will have pre-built in of the accounting functions and other related features. However, the existence of the user-friendly accounting-software package will also affect the position of the accountants. It is possible that the clients (with little knowledge about accounting) can prepare the accounting statements and reports themselves by the guidance of the user-friendly software. Moreover, the organizations can utilize the Internet to fill in their income tax forms without the assistance of the accountants. Consequently, the significant role of the accountants may be affected in the future because of the technology.

It is expected that in future, there are more people are able to prepare the related statements and reports themselves without the assistance of the accountants. The accountants may be eliminated by automating their roles or jobs by the technology.

The readiness of the accountants

Although the future of the accountants and the reporting is an uncertainty, it is still predictable. The development of the information technology is already one of the important factors that will affect the future of the accounting. Are the accountants already ready for the future? What are the things had been done by the accountants for facing their future?

i) Technological

There are many accountants already realized that information technology will adversely affect their future. They are also having the assumption that accountants without the knowledge about the computer will be eliminated in the future. Unfortunately, most of the accountants are non-computer literature especially the seniors accountants. Therefore, some of the accountants are taking an initiative to enroll some computer courses. From the computer courses, they can learn to manage the computers and know more about the Internet. As a result, they can apply what they had learnt on preparing the accounting statements and reports. It is very important for protecting themselves to be eliminated by others in the future.

In addition, some accountants (who are already knowing about the computers) also have taking the advanced computer courses for improve their knowledge on information technology. This is because they have a belief that if they know more things, it is a guarantee that they can survive in the competitive future. It will be the competitive advantages of themselves than others also.

Besides that, some accounting firms also begin to arrange some training courses of the computer and the latest accounting software courses for their staffs. The first purpose of the firms doing so is to make sure their staffs would not be out-dated of the trend of the technology and then can accomplish the task faster. The next purpose is to prepare the firms before they will reengineer their business processes in the future.

ii) Communication Skills

Nowadays, most of the accountants are just sitting in the office for doing the accounting statements and reports. There is very less opportunity for them to meet or interact with their clients. In the office, they are only interacted with their co-workers. As a result, many accountants assume that the good communication skills are not really required in their jobs.

But, it is not the truth in the future. It is expected that the role of the future accountants will not just simply the custom accountants who are preparing the accounting statements and the reports in the office. In future, the accountants have to meet with their clients to explain, analyze and predict about their business based on their accounting statements or the reports. Unluckily, most of the accountants are not realized that the good communication skills are that significant for them in the future.

The good communication skill is that important because the expectations of the clients on the accountants in future are different from the past and even now. For the past and now, most of the clients are only expecting the accountants to help them to prepare the related accounting statements or reports. In the future, the clients will expect to gain more information about their business from the accountants based on the related accounting statements or reports. Without the good communication skills, it would be unable to meet their expectation. Consequently, most probably the clients will switch to the other accounting firms which able to meet their expectations.

iii) Globalization

For the past and even now, most of the accounting firms' businesses are only limited to their own country. There is still very less accounting firms are doing their businesses globally. Therefore, the accountants and the staffs of the accounting firms are only familiar with the accounting statements and reports format of their country, the taxation regulations of their country and the accounting standard of their country.

In future, most of the accounting firms are expected that they will be operated in the Internet-based. This means that most of the firms will extend their business to the other country. This is because there is no geography boundary between one country and the other country. The firm can interact with their clients from anywhere through the Internet. Moreover, the total revenue of the firms also will increase due to the expansion of the existing market to the other country.

However, there are the difficulties or the barriers for the accounting firms to extend their business to the other country. As mentioned earlier, most of the accountants and the staffs can complete their tasks effectively in previous since they are familiar with the tasks which had been assigned to them. If the firms extend their business to oversea successfully, it is not guarantee that the staff are able to perform that as well as before. This is because there are differences in the accounting statements and reports statements format, taxation regulations and accounting standard in the difference countries. Without the clear understanding about the different standards, formats and regulations of the accounting, the accountants and the firms' staffs are unable to prepare the good accounts statements and the related reports.

iv) Lack of the Knowledge

Nowadays, almost 90% of the accountants and the firms' staffs have lots of knowledge about the accounting and the reporting. They had gained the knowledge from their study in the universities and also from their experiences of the works. And then, that knowledge is sufficient for them to accomplish their tasks in the past and now. Nevertheless, are the knowledge about the accounting and the reporting sufficient enough for them to survive in the future?

On the other hand, most of the accountants have the opposite view on that. They are strongly believed that the main role of the accountants is to prepare the accounting statements and reports with the given data and information. They are not realized that in future, the accountants will not just simply the ordinary accountants that handle the figures only. The environment of the future will diversify the roles of the accountants. In future, the accountants have to know about their clients' business and organizations. They also have to analyze the financial statement. From the analysis, they have to predict on the clients' businesses from the financial statements. Then, they have to explain the financial statements, the analysis and their predictions to the clients. They may even need to provide some suggestions to their clients. Moreover, they have to learn more about the accounting and reporting of the other countries. As a consequent, lack of the different knowledge may risk their career in the future.

RECOMMENDATIONS FOR ACCOUNTANTS AND ORGANIZATIONS

i) Technological

The advancement of the technology in this past two decades is the greater invention of the world than the invention of the past 200 years. One of the technologies is the Information Technology (IT). IT had adversely diversified the roles of the accountants and changed the methods of preparing the accounting statements and also the reports. In other words, IT will play more crucial role on the accountants and even the accounting firms.

Nowadays, there are quite lots of the accountants already had taken an initiative to enroll some computer courses and IT-accounting related courses to enhance their knowledge about the computers. However, there are still some accountants are not taking any computer-related courses. Furthermore, they are categorized in the non-computer literature groups. This is because they have a view that the custom technique of preparing the accounting statements and reports are more reliable than the computer. In the future, it is expected that almost 80% of the organizations of the world which are including the accounting firms would be operated in the computer-based and Internet-based. Thus, they have to change their view and then give themselves the opportunity to interact and learn with the computers.

Besides that, some of the accountants who are already had the knowledge about the computer maybe will have the view that computer can replace them to perform some of their tasks. As a result, while performing the tasks, they will become too dependent on the computer. The computers and even the Internet are also having the limitations and the pitfalls. Thus, if too dependent on the computers, it will affect their smoothness of their working operations when the computers have the problems like the server is down. They have to prepare themselves to work in the conventional ways as some situations like no electricity and computers are affected by the virus. The computer is only simplifying the tasks and reducing the time, but it will not replace the human to perform the tasks.

It is expected that more and more accounting firms will transform their business to the computer-based firms and Internet-based firms. So, the middle-sizes accounting firms and the smaller-sizes accounting firms also have to transform to the computer-based firms and Internet-based firms. Although there will be lots of the difficulties such as financial problems for them to do so, they are forced to do so also. If they not do so, they will be unable to compete with their competitors and even would be abolished. They may change their firms to operate in the semi-computer based. This means that the firms would operate in both the mix of the conventional and technological method. It would reduce the burden of the firms in the investment of the technology while maintaining their competitive advantages.

As mentioned previously, most of the accounting firms of the future are the computer-based and the Internet-based firms. Thus, the clients' organizations also must have the computer system to allow them to interact with the accounting firms. The clients also have to prepare themselves and even their organizations with the computer system and also the basic computer knowledge. In addition, their staffs also have to be trained on the computers and the Internet. Besides that, the accounting firms and the accountant also have the responsibility that to teach their clients to use the related accounting software for the interaction and data transformation.

ii) Communication

Communication skill is not that important for the accountants of the past and even now. This is because the person who are interacting with the clients most is the boss or manager of the accounting firms. The main task of the accountants is only to prepare the accounting statements and reports. But, in the future, they will have lots of the opportunities to interact with the clients since the change of the environment and the diversification of their roles.

Therefore, most of the accountants are suggested to take some courses which can help them to improve their communication skills. In addition, it is significant for the accountants to build up their own confidence. This is because when the confidence had been built up successfully, the hesitation would be automatically eradicated. They may also attend some social events or activities. This will assist them to learn the way of the interaction with the people from the different background.

If the accountant has the ability to speak different languages, it will be their strengths than the other accountant. This is because the clients will feel comfortable while they communicate with the accountants in their familiar language. In future, most of the interactions between the accountants and the clients are faceless. Hence, the accountants have to learn to communicate with their clients through the Internet. For instance, they have to learn to communicate with their clients through the email and online chatting tool such as Yahoo Messenger and MSN Messenger.

In addition, the accountants also have to improve their analytical skills. The accountants have to understand and analyze the figures on the financial statements. The analysis should provide meaningful information to their clients. Besides that, they have to become skilled at analyzing the environment within the client's company or organization and even the outside of the organization. This is because the happenings of the organization and outside the organization will adversely affect the outcomes of the financial statements or reports.

iii) Globalization

As stated earlier, most of the accounting firms and accountants are not realizing the effects of the globalization. The first thing which the accounting firms and accountants have to do is to change their view on the globalization. They should more focus and look seriously on the issue of the globalization. In addition, they should understand the effects of the globalization on the future of the accountant firms and accountants.

Then, they should start planning to face the challenges from the globalization and operate their business internationally. They should try to attract new customers from the difference parts of the world. Without a group of the staffs and accountants able to manage the different countries' financial statements and reports, a large group of the foreign clients will become meaningless to the company. Thus, they should have a group of the staffs and accountants understand well in the world business and the standard of the accounting of difference countries. The technological resources also are playing that important role for the firm to overcome the challenge of the globalization. Therefore, the firm has to utilize the facilities of the Internet and computer to interact with their clients from difference countries of the world.

The accountants should take an initiative to understand the accounting and reporting from difference countries. For instance, they should put more efforts on the understanding of the accounting standard of the difference countries, the format of the reports of the difference countries. In addition, they may do some analysis on the disparities of the standard and the format. The same figures and the information on the both financial statements or the reports can be differently interpreted on the different business environment. As a result, the understanding of the basic of the global business environment will allow accountants easily to explain to their clients in the different situation.

iv) Knowledge

In the future, the environment is required the accountants to gain more knowledge on the other areas. Before the accountants taking any further steps to gain more knowledge from the other areas, they have to improve their existing knowledge about the accounting and reporting. For instance, they have to keep themselves are always that updated with any change in the standard of the accountings, the trend of the accounting within and outside the country and the latest format of the reporting.

The accountants may raise the question that "what are the other areas of the knowledge they should gain". As stated earlier, the accountants have to gain knowledge of the Information Technology. It is expected that it will be one of the significant trend in the future. Besides that, the accountants have to learn some basic concepts of the economics and finances. In addition, the accountants also must have the clear mindset of their clients' organizations and clients' business operations. Then, they have to keep themselves always that alerting and sensitive on the happenings of the local and also the global business. All of these components are strongly interrelated with the accounting and reporting of the future. Thus, there are playing an important role to help the accountants to make the analysis on their current clients' business and the predictions on the future of their clients' business.

In the next 10 years, it is strongly believed that it will be the globalization era. Hence, the interaction between people will be the cross-culture interaction. This means that most of the accounting firms and the accountants will interact with the clients and maybe even the co-workers from the difference background and culture. Therefore, it is important that the accounting firms and the accountants able to explore more on the difference culture of the others. This will avoid the occurrence of the misunderstanding between the accounting firms or accountants with their clients or co-workers. The misunderstanding highly possible will generate the loss of money to the accounting firms.

Other factors – affect the future of the accounting and reporting

i) The role of the professional association of the accounting

Nowadays, each country has its own professional association of the accounting. Hence, there will be some differences or disparities in the standard of the accounting and reporting of each country. These differences will not cause any problems on the current accounting and reporting because of the financial statements and the reports are only prepared by the local accountants or the accounting firms.

However, this environment will be changed because of the globalization. For instance, the accounting firms or the accountants of other country would prepare the financial statements or reports to their clients from Malaysia. There are some differences in the standard of the financial statements or reports. Malaysia is following the indirect method of the cash flow whereas the other country is following the direct method of the cash flow. As a result, this may cause the confusion because of the different techniques.

To overcome this problem, the accounting firms or accountants of the other country may take an initiative to be aware of the standard of the Malaysia. If the particular accounting firms or accountants are interacting with many countries' clients, it is not the easier task for the firms or accountants to understand well on each country standard. Consequently, it may lead to difference version of the financial statements and reports in the same country. Therefore, it is important that the world professional associations of the accounting take some appropriate steps to standardize one format of the financial statements and reports to the whole world. If not, this is difficult for the clients to determine which version of the financial statements or reports is the acceptable standard.

Besides that, it is the responsibilities of the accounting association to provide the guidelines about the future of the accounting and reporting to the accountants or the accounting firms. There are many accounting firms and accountants still not realize about what they have to do for facing the challenge of the future. The guidelines will play an important role to guide them for taking the appropriate steps which let themselves ready for the future. Without the guidelines, many accountant firms and accountants maybe will be getting rid in the future. The serious elimination may cause the demand of the accountants will more than the supply of the accountants. Consequently, this will lead to the problem of lack of accountants in the future.

In addition, the accounting associations have to start to plan and create the relevant guidelines about the new syllabus of the accounting courses in the high education institution like college and universities. The previous syllabus of the accounting is not sufficient enough for the college or university students who are future accountants. This is because there are unable to let them survive in the dynamic environment. The earlier exposure of the future accountants with the different areas is that important for preparing them to be tough enough to face the future which is full of challenges and rapidly change.

ii) The client expectation

Without the clients, there will not be the existence of the accountant firms and the accountants. Therefore, the future of the accountants and reporting are strongly interrelated with the clients. As stated previously, the clients would feel satisfy if the accountants able to prepare the complete financial statements and reports during the past. Will this still true for the future?

In the dynamic environment of the future, this is definitely not true anymore. Most of the clients will have some basic concepts of the accounting, they will expect more from the accountants. What will be their expectations? And then, how these expectations will affect the future of the accounting?

They will expect the accountants of the future will be different from the accountant of the past. This means that they expect the accountants of the future are the ones who able to perform different tasks other than prepare the financial statements and reports. They will hope that the accountants can analyze the financial information to them. The analysis of the financial information should be allowed them to understand their organization's financial situation. They also will expect that with the assistance of the accountants, they can solve the company's problems.

In addition, the accountant should be the good communicator. Then, they can interact well with the accountants. This is because the clients have a view that the good interaction will let the accountants prepare the financial statements and reports that really reflect the organization's situation. Some clients maybe will expect the accountants can play the role as the legal expert. This means they hope that the accountants able to help them if the company has been sued because of their financial statements and reports are related by the illegal issue. The clients also will expect that the accountants would be the good predictors. The accountants of the future should able to predict the future financial situation of the company based on the financial statements and the business environment.

As a result, the accountants of the future have to be the ones who are capable of playing different roles besides their mail role as the accountant. To achieve that, the accountants have to understand every facet of business operations. They also must be the ultimate authority on how business works.

iii) The new trend of business

At present, most of the companies or the organizations are preparing the financial statements and reports such as profit and loss account and balance sheet annually. In future, this situation most probably will change. This is because it is more suitable to prepare the financial statements and reports quarterly of every year in the dynamic environment. This will generate more businesses to the accounting firms and accountants. Consequently, the accountants and accounting firms will gain more profits.

For the conventional financial statements and reports, it had the assumptions on the variable and fixed costs and also variable and fixed assets. But, in future, it is believe that (Accounting notes- Module 10) "the variable costs and the fixed costs would be obsolete due to computerized production control, robotic production lines and other advanced manufacturing technology (AMT). In addition, there are lots of potential exists in differentiating the basis of quality, customized design and speed of order processing and execution. This involves sensible expansion of overheads which are to be encouraged. But most business regard overheads a burden to be squeezed out from the cost profile as far as possible. Competition on price is intense and the demand for a management accounting system to identify accurate product costs becomes more pressing. A cost system based on inventory valuation and financial accounting may not be useful for business to sharpen its competitive edge."

Thus, the "Activity Based Costing (ABC)" maybe will replace the traditional costing of management accounting in the future. It is the new accounting technique which attempts to overcome the limitations of the traditional costing. It is focusing on the belief that activities not products cause costs to be incurred. The examples of the activities are the production planning and quality inspection. Actually, there are some company already had attempted this new technique. Consequently, they had achieved a great success. But, some company were met the failure after they made an attempts on this new technique. Currently, this technique is still in the trial period. It is strongly believed that the company with lots of technology and automation in their manufacturing will achieve a great success if they are implementing the ABC in the future.

Branding is becoming one of the significant components that deciding the success or failure of the company. If the company able to established the brand, the revenue of the company will strongly increase. In addition, the value of the brand is that high. For example, the brand of Coca-Cola is worth US\$ 68.95 billion in the year 2001. Therefore, it is estimated that more and more company will concentrate on the establishing of the brand in the future. As a result, brand will become valuable intangible assets for one company.

But, the conventional ways of the accounting and reporting is to have only the fixed and variable assets. Although the brand is the significant asset of one company, it is unable to record it in the conventional financial statements and reports. Hence, the financial statements and reports without the brand are not really reflect the real financial situation. Since the branding become more important from days to days, there will be invention of the new accounting technique in the future. This new technique will able to combat the deficiencies of the conventional method.

LIMITATIONS

In this paper, the shortcoming is there is no any opinions or views had been gathered from the accountants and accounting firms about the issue of the future of the accounting and reporting. There is also not has any models in this paper that are discussing about the future of the accounting and reporting. In addition, there is not much proof in this paper really can reflect the future of the accounting and reporting. The discussions in this paper in this paper are more based on the logic prediction from the observation. We have stressed that this shortcoming is common in the future-related literature. It is important that this can be accountants' and accounting firms' references or guidelines of the direction towards the future of the accounting and reporting.

CONCLUSIONS

In this paper, we have determined some limitations of the technology which may affect the future of the accounting and reporting. The accounting and reporting of the future will gain lots of benefits from the technology if the limitations of technology can be overcome one day. There are some discussions about the readiness of the accountants and accounting firms on the future of the accounting and reporting in this paper. Specific changes which the accountants and the accounting firms have to make for facing the challenge of the dynamic future have also been recommended. The discussions and the suggestions can assist the accountants and accounting firms to examine their efforts on their preparations for the future. They also provide guidelines and directions towards the future the accountings and reporting. Furthermore, some of other factors which may affect the future of the accounting and reporting has also been determined. The accounting and reporting of the future will keep changing while they towards the direction of the dynamic environment. Although the environment of the future is that dynamic and challenging, as long as the accountants and the accounting firms have prepared themselves for the future, their future will be that bright.

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