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The Impact of Information Technology on the Accountancy Profession in Hong Kong

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The IT age has been upon us for some time now. All well and good. It is widely recognized that IT has made considerable inroads into major sectors of the economy in Hong Kong. The position regarding service industry is less clear as the penetration of IT into service industry is somewhat less than into industry in general. This paper reports on the results of a survey of the impact of IT on the Hong Kong accountancy profession. The findings are analyzed in terms of form of ownership of IT facilities, accountants' involvement in IT planning, development, implementation and maintenance, major systems and accounting software used, factors for evaluation of IT proposals, extent of IT advice to clients, and possible reasons for poor achievement of IT applications. The paper concludes with a discussion on the direction of the implications on the Hong Kong accountancy profession in the future.

Introduction

Information technology (IT) is undoubtedly a phenomenon of the 1990s. In recent years there has been considerable interest in the impact of IT at the societal, the organizational and the individual levels. At the societal level, studies on the impact of IT on employment, quality of work and nation's competitive edge have been made. At the organizational level, the impact of IT on structure, power shift and organizational change has attracted considerable attention. At the individual level, IT has been studied for its impact on user satisfaction, job satisfaction, productivity, work attitudes and user expectations. Limited researches, however, have been carried out to study the impact of IT on the accountancy profession. One possible reason is that the profession has been no more immune to the spread of IT than any other industrial and business sectors of the economy. No doubt the changing work pattern brought about by IT has had some impact on the work of accountants. Many auditing and accounting methods and procedures have in the past been paper reliant, so new techniques will have to be created to ensure the integrity of data in an electronic age. In addition, artificial divisions such as year-ends and quarterly periods are losing their relevance in an era when financial information is constantly updated, and available on-time anytime. Furthermore, the character of information is being enhanced in such a way that images and voice are taking a greater role in satisfying accountants' information needs in addition to the traditional numbers and texts. All these changes have had, and will continue to have, a profound effect on the office work, job attitude and the work environment of accountants.

What is not clear is the direction of the impact on the accountancy profession.

IT is actually a very big subject and in fact any description of its elements is likely to be quickly outdated because of its rapid pace of development. Accordingly, IT is easier to describe than to define. Existing definitions in the pertinent literature can, however, be classified into those which stress the technical aspects and those which emphasize the information side. Definitions include the British Advisory Council for Applied Research and Development: "the scientific, technological and engineering disciplines and the management techniques used in information handling and processing; their applications; computers and their interaction with men and machines; and associated social, economic and cultural matters" represent the technical viewpoint. One good example of definition of IT from the information aspect is provided by the U.K. Department of Industry: "the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numeric information by a micro-electronics-based combination of computing and telecommunications". For the purposes of this research paper, IT is used in the generic sense to refer to the confluence of computer technologies, office technologies and telecommunication technologies. The term "impact" means implication, consequence and effect. It refers to changes effected by the implementation of IT.

Purpose of the study

In order that we can appreciate what effects have IT had on the accountancy profession in Hong Kong and how it is likely to affect the accountants' role in the future, we have carried out this pilot study to obtain answers to the following questions as:

1. What is the form of ownership of IT facilities?
2. Who is responsible for planning, development, implementation and maintenance phases of IT applications?
3. What are the major IT systems and accounting software used?
4. What are the criteria used to evaluate IT proposals?
5. What is the extent of IT advice given to clients?
6. What, if any, are the reasons for poor achievement of IT applications?

Methodology

The methodology for the survey consisted of a questionnaire that was delivered to mature students studying

for B.A. (Hons) in accountancy degree at the Hong Kong Polytechnic University in December 1994. These students are previous non-degree graduates of the university and majority are qualified accountants with over three years' working experience.

Survey Results and Analysis

Out of the 80 questionnaires sent, a total of 48 responses have been received. This represents a response rate of 60% which is judged to be satisfactory and adequate considering the pilot nature of this study.

An analysis of the respondents' profile revealed that 20 of the respondents were from private industry, 10 from public accounting practices, 13 from the government sector or non-profits organizations, and the remainder were from other organizations. In addition, 54.2% were accountants with more than one professional titles. The survey found that 54.2% had been working in the accountancy profession for 3 - 6 years, with 66.7% were working in company/organization with more than 200 employees.

In considering the use of IT, 85.4% of the company/organization had made use of IT to assist their operations. Of these, more than 70% owned the facility directly, with less than 5% and 7% renting and combining both direct ownership and renting respectively. In addition, the survey found that 24 respondents (50%) answered that the IT applications were provided through in-house facility, with 1 respondent (2.1%) replied using the outside computer bureau only.

As regards the influence of accountants within different phases of IT applications, the survey found that the data processing manager or systems manager had high responsibilities to the initial planning, with the involvement of accountants being minimal. When it came to the later phases of development, implementation and maintenance, the data processing manager or systems manager continued in high profile; however, the accountants became more involved at these stages.

The survey results indicated that word processing and spreadsheet applications were the two major tools accountants in Hong Kong used in their daily work routines. Database software were also employed but only in a limited extent. The survey also showed that presentation graphics and other software applications were rarely used by the professionals.

One area that may interest accounting profession is whether certain computer-based accounting packages are dominating the market. The survey did not show any conclusive evidence of the existence of such domination. However, some of the well-known off-the-shelf accounting packages, including DacEasy, ACCPAC, and Sun Account had been mentioned by respondents. The survey did reveal that the custom-made, self-developed accounting packages were not widely employed in business firms in Hong Kong.

Traditionally in Hong Kong, English has been the principal business language. However, the growing mainland China economy should have encouraged companies to adopt

more Chinese software applications in their daily business activities and communications. The survey showed that word processing was the only major Chinese IT application used in the Hong Kong business world. Very few respondents indicated they were using Chinese spreadsheet and database applications. None of the other Chinese applications were ever employed by the accounting professionals. The underlying reasons may be two-folds: the non-standardization of the Chinese input methods and the perceived difficulty and inefficiency of keying Chinese characters into the applications by users.

One area of surprise being revealed by this survey was that most employers generally did not provide in-house training on the software applications used by their staff, not even through vendors. A large percentage of respondents reported that most of the time they need to learn the application software by themselves. A number of respondents said they learnt how to use the software packages such as word processing and spreadsheet applications through combination of means but primarily they were on their own to study through manuals and learnt by practices. This phenomenon showed that in Hong Kong software training was grossly inadequate because top management were generally reluctant to invest in the training activities. Eventually, the productivity of employees and workplace suffers.

In respect of the importance of accounting applications being used by accountants, two categories of respondents were separately analyzed: one for accountants in public practices, and the other for those working as an accountant in industry. For accountants in public practices, it was quite logical that they considered computer-based working-paper was the most important accounting application. But the industry accountants ranked financial reporting module as the most important accounting application for their daily activities. The sales and accounts receivable module came in the second place. The third most important accounting application was the purchase and accounts payable module. The production, payroll, and budget preparation modules were being placed in the middle ranks while the modules of personnel, capital expenditure, and tax were ranked as the least important accounting applications considered by respondents.

Both mainframe, minicomputers, and microcomputers were being used to process the above accounting applications. The choice of computer configuration largely depended on the size of organization and the volume of business transactions. A noticeable trend was that more and more companies used combination of mainframe, minis, and micros to process the same accounting module such as financial reporting in order to improve the information quality and processing efficiency.

Because accountants usually regarded themselves as an information provider, when they were called upon to evaluate the IT proposals on the company operations based on various perceived benefits to the company, majority of them ranked "Improved Information Quality" as the most important

consideration. The "Increased Operating Efficiency" came only in second place. The third highest ranking went to "Improved Customer/Clients Services". The "Cost Savings", "Improved Working Condition" and "Keeping in Line/Ahead of Competition" were not being regarded as important benefits by accountants. The least important consideration was "Reducing Staff".

The survey also found that there was no one view about the extent of specialised IT advices on hardware and software technology provided by the public accountants to their clients. Most of the respondents answered that they had never provided any advice to their clients and replied that they had been called upon to provide such services. Such lack of involvement by accountants in public practice in providing specialized IT advice is disappointing, given other professionals, including bankers and financial consultants, were able to provide IT services to their clients. For those respondents working in company which provides IT facilities to clients, both financial reporting and sales and accounts receivable modules were the most important accounting applications. The least important one was the personnel module. It was quite logical because the personnel information of the client organization was usually regarded as highly confidential and sensitive. The organizations which could provide spare IT facilities to clients were mainly using mainframe computers.

Based on the survey results, the main contributory factors for unsatisfactory performance of IT applications would appear to be inadequate support from vendor, poor communications between users and IT personnel, wrong choice of software, user resistance or conflict and inadequate support from top management. This is much in line with the findings of a joint study by the Institute of Chartered Accountants in England and Wales and Coopers & Lybrand. Amongst other issues, the study stated that the two most important "people" problems encountered when trying to implement IT were inadequate consultation with staff in different jobs and at various levels in organization, and lack of commitment at a senior level. In addition, the study concluded that the two most important "technical" problems encountered were to produce a clear specification of user needs which was understood and accepted, and to identify software which is suitable for the work.

The Future Direction

Certain events have happened and gave us insight to the likely effects of the IT on Hong Kong accountancy profession in the future. Firstly, a broader educational philosophy to include the mastery of IT concepts and applications should be adopted in the training of future accountants, so that they can compete equally with other professionals, like bankers and financial consultants, to use IT to satisfy their clients' needs. Secondly, accountants in public practice should have greater involvement in different phases of IT applications, particularly the development and implementation of IT, since

their goal should be to assist clients in improving products and services to cope with the information age.

Conclusion

One of the crucial limitation of our study is that it has only provided "snap-shot" results at a particular point in time and it is, in fact, a static analysis of a dynamic situation. Another limitation is the comparatively small sample size used in the survey. The results so obtained may not be representative given that the number of qualified accountants working in Hong Kong is very large. Future in-depth rigorous study will definitely incorporate a more representative sample size.

The impact of IT on Hong Kong accountancy profession are complicated than has been traditionally assumed, and much more research is needed before a clear picture is likely to emerge. It is our opinions that the crux of the matter is that the human issues involved in the IT applications will have to be effectively handled if the fruits of technology are to be reaped within the accountancy profession.

Based on the survey results, we observed that although there is little doubt that IT revolution is under way, its progress in the Hong Kong accountancy profession is somewhat patchy. Accountants are no longer possible to simply "look in the rear-view mirror" and evaluate financial data as a sole basis of making decisions for the future. Knowledge of IT is power in the 21st century. The accountancy profession in Hong Kong should need to be well-prepared for the advent of the information age.

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