

Current Availability of Forensic Accounting Education and State of Forensic Accounting Services in Hong Kong and Mainland China

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I. Introduction

Forensic accounting is a professional accounting discipline involved in a wide range of practices, such as fraud examination, investigation of corruption and bribery, business valuation, expert witness, cybercrime management/cyber security and litigation support (Crumbley et al., 2015). It employs accounting concepts and techniques in investigation and documentation of financial frauds and white-collar crimes and provides litigation support functions. While forensic accounting has been used to support law enforcement agencies in investigating financial impropriety before, its emergence as a prominent accounting practice occurred only after Enron and WorldCom accounting frauds in the early 2000s. Surveys conducted by accounting firms and professional associations show that forensic accounting services emerged as an important practice in the United States and other parts of the world, which are caused by an increase in cases of corruptions, procurement frauds, financial statement frauds, asset misappropriations and cybercrimes (Association of Certified Fraud Examiners, 2014; EY, 2013; PricewaterhouseCoopers, 2014; KPMG, 2013).

In the past few years, the world has witnessed an increasing number of accounting scandals involving Hong Kong and Mainland Chinese firms listed in Hong Kong and overseas. In 2010 alone, over twenty Chinese firms were delisted or suspended by U.S. securities regulators. A number of other firms were affected or indeed devastated by the resignation of their auditors. At the end of 2013, more than 120 Chinese firms were facing securities investigation in Hong Kong, Singapore, the United States and Canada (Brittany Lang and J.R. McGowan, 2013). As regulators and investors become increasingly concerned about accounting irregularities at U.S. listed Chinese companies (Yimiao Chen et al., 2015), it is reasonable to say that the demand for forensic accounting services should be on the rise in Hong Kong and Mainland China. Currently, all Big Four international accounting firms and some Chinese accounting firms provide forensic accounting services in Hong Kong and Mainland China. Big four accounting firms are aggressively expanding forensic accounting services in Hong Kong and Mainland China (George W. Russell, 2012). Also in light of expansion of the field, the Hong Kong Institute of Certified Public Accountants (HKICPA) has developed a Forensic Accounting Interest Group in 2011 with a membership of more than 500 professionals in 2015.

This growing demand for forensic accounting services worldwide raises the question of whether there is provision for adequate basic forensic accounting training at the undergraduate/postgraduate levels in Hong Kong and Mainland China. We first investigate the availability of forensic accounting education in Hong Kong and Mainland China. Previous study on the availability of forensic accounting education in Hong Kong and Mainland China is rare. Seda and Kramer (2014) find that only two universities in Hong Kong are providing forensic accounting courses. Li Silong (2008) surveyed the participants of the forensic accounting conference in 2007 and listed eighteen universities in Mainland China, which provide forensic

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accounting courses/programs. It is unknown about the current availability of forensic accounting education in Mainland China since 2008. This research first updates the availability of forensic accounting education in Hong Kong and Mainland China. Table I below updates the availability of forensic accounting education in Hong Kong. [see Table I, pg 524]

Table I show that only three of eighteen universities in Hong Kong offer one or more forensic accounting courses currently, while none of them offers forensic accounting programs. Consistent with Seda and Kramer (2014), Hong Kong Polytechnic University and Lingnan University offer forensic accounting courses in Hong Kong. In addition to these two universities, we find that Hong Kong University jointly with ACFE Hong Kong Chapter provide forensic accounting courses recognized by the Hong Kong Institute of Certified Public Accountants as qualified continuing professional education in 2015.

It is possible that forensic accounting education in Mainland China has developed since 2008. We update the current availability of forensic accounting education in Mainland China. As most Mainland Chinese universities do not have websites in English, we conducted our online search for Mainland Chinese universities running forensic courses and programs with the keywords "forensic accounting" in Chinese. Table II below reports the results, which is qualitatively similar with Li Silong (2008). [see Table IIa, pg 525 and Table IIb, pg 526]

Table II shows that nineteen out of around 2,800 universities/colleges offer forensic accounting courses and programs in Mainland China. Among these, five universities/colleges offer forensic accounting courses only (Table IIa); twelve universities/colleges provide forensic accounting programs and two universities/college have forensic accounting research programs (Table IIb and IIc). There is a marginal increase in forensic accounting education in Mainland China since 2008. This situation contrasts dramatically with the U.S., where as many as 422 universities and colleges offer forensic accounting courses, with ninety-seven of them offering forensic accounting programs (Seda and Kramer, 2014). There is a high level of availability of forensic accounting education in Canada and other countries too. Among 186 Canadian and other foreign schools (mainly English speaking countries and specifically excluding Mainland China), twenty-five offer forensic accounting courses and twenty-three offer forensic accounting programs (Seda and Kramer, 2014).

Forensic accounting education in Hong Kong and Mainland China currently appears to be lagging seriously behind the United States and much of the rest of the world. What are current situations of forensic accounting services in Hong Kong and Mainland China? The issue is crucially important and of great interest to accounting professionals, educators and policy-makers. On the one hand, if forensic accounting services remain stagnant in the future, accounting professionals and policy-makers will not invest in development of forensic accounting. On the other hand, if the of demand forensic accounting services is increasing, accounting professionals, educators and policy-makers will contribute additional resources and efforts to the development of forensic accounting.

To address this issue, this research further analyses the impact of country-level environmental factors on forensic accounting services and concludes an increasing demand for forensic accounting services in the future in Hong Kong and Mainland China. It makes three important contributions. Firstly, it updates availability of forensic accounting education in Hong Kong and Mainland China. We find that three universities in Hong Kong and nineteen universities/colleges in Mainland China offer forensic accounting courses/programs in 2015. Secondly, it contributes to accounting literature by providing new insights into the impact of environmental factors on relevant forensic accounting services in the contexts of Hong Kong and Mainland China. Thirdly, it analyses development of forensic accounting services in the two regions with distinct legal origins: Hong Kong is based on common law and Mainland China code law. Consequently, it contributes to the understanding of how environmental factors affect the development of forensic accounting services in both code law and common law regions.

The next section presents a framework of elements of environmental factors affecting accounting, while section III analyses the effects of these environmental factors on forensic accounting services in Hong Kong and Mainland China. Section IV concludes.

II. Framework of Elements of Five Environmental Factors

Current accounting research has stagnated (James Rebele and Kent Pierre, 2015). However, a series of studies in 1980s and 1990s provide a framework on the effect of country-level environmental factors on the development of accounting as "accounting is a product of its environment" (Radebaugh and Gray, 1997, page 35). Previous literature (e.g., American Accounting Association, 1977; Choi and Mueller, 1984; Nobes, 1984; Radebaugh and Gray, 1997) gave a framework of the five environmental factors: 1) economic; 2) legal; 3) social/cultural; 4) political; and 5) professional. Table III below, summarizes the elements of each of five environmental factors based on previous research. [see Table III, pg 529]

Firstly, Table III presents that economic factors include economic system, stage of economic development, development of capital markets, business ownership and business activities of the enterprise. American Accounting Association (1977) classified economic systems into two groups: 1) a market-based economy; or 2) a planned economy; categorized stages of economic development into three stages: 1) traditional; 2) take-off; and 3) maturity. Choi and Mueller (1984) and Nobes (1984) argue that more developed stock markets lead to separation of tax and accounting and large auditing profession. Radebaugh and Gray (1997) categorized business ownership into broad ownership, family ownership and state ownership. They argue that more extensive international business activities affect the development of accounting rules such as translation and consolidation of foreign incomes.

Secondly, Table III reports that legal factors include legal system, the source of authority of accounting standards. Choi and Mueller (1984), Nobes (1984) and Radebaugh and Gray (1997) classified countries into common law countries and civil codes (code law) countries. American Accounting Association (1977) classifies the source of authority of accounting standards into three types: 1) legislation action; 2) government administrative units; and 3) public-private consortium.

Thirdly, based on Table III, social/cultural factors refer to social climate, the culture and cultural accidents. Nobes (1984), Choi and Mueller (1984) and Radebaugh and Gray (1997) defines social culture as societal or national values. Social attitudes towards business and accounting affect scrutiny of business operations and status of the accounting profession (Arpen and Radebaugh, 1985).

Fourthly, political factors refer to the political systems in Table III. American Accounting Association (1977), Choi and Mueller (1984) and Radebaugh and Gray (1997) argue that political philosophies of socialist and capitalist countries affect the accounting systems. For example, socialist countries demand certain information regarding companies' social impact for political expedience.

Finally, Table III states that professional factors include the profession, education/training and licensing, ethics and standards, professional organizations. Education/training and accounting standards affect the development of accounting profession. American Accounting Association (1977), Nobes (1984), Choi and Mueller (1984) and Radebaugh and Gray (1997) include the regulation of the accounting profession, education/training and licensing, professional organizations in the professional factor. Developing countries generally lack education and research infrastructure and lag behind in accounting professional development (Radebaugh and Gray, 1997).

III. Economic, Legal, Social, Cultural and Political Environment

Based on the previous framework of elements of five environmental factors, this study further investigates effects of each of the five environmental factors on forensic accounting services/practices in Hong Kong and Mainland China.

Economic Factors

Previous literature focused on the effect of economic factors on accounting regulations and reforms in Mainland China. For example, Liu and Eddie (1995) and Davidson et al., (1996) argue that the economic reform from a centrally-planned economy to a market-oriented economy affects the accounting reform. Zhang Weiguo (1996) describes the effect of increasing transaction complexity on accounting reform in Mainland China. We investigate the economic system, stage of economic development, development of capital markets, business ownership, business activities of the enterprise and technology on forensic accounting services in Hong Kong and Mainland China.

Firstly, Mainland China and Hong Kong have different economic system and are at different stages of

economic development from the U.S., which is at the stage of maturity. Mainland China has transited from a planned economy to a market-based economy. It experienced the rapid economic growth over the past decades and is at the economic development stage of take-off moving to maturity. Hong Kong is a market-based economy and at the stage maturity in economic development. It has benefited from that economic growth since Hong Kong maintains close economic links with Mainland China. In a period of economic growth, it is much easier to conceal fraud (ACCA, 2009). As a result, the number of fraud cases is relatively small, and the demand for forensic accountants is limited. For example, forensic accounting staffs typically comprise less than ten percent of an entire firm's headcount in Hong Kong (ACCA, 2009).

Secondly, stock markets are less developed in Mainland China and Hong Kong compared with those of the U.S. For example, Mainland China opened Shenzhen and Shanghai stock exchanges in 1990s and there are currently around 2,600 firms listed on these two stock exchanges. Around 1,630 firms are listed on the Hong Kong Stock Exchange currently. In contrast, the New York Stock Exchange opened in the 1890s and NASDAQ in 1970s, and the two stock exchanges list over 5,000 firms. Consequently, there is considerably more demand for forensic accounting services in the U.S. As the number of firms being listed in Hong Kong and Mainland China increase, the demand for forensic accounting services is increasing steadily.

Thirdly, ownership structure of firms in Hong Kong and Mainland China are different from that of U.S. firms. Mainland China is dominated by state-owned firms (Claessens et al., 2000). Historically, state-owned firms had little freedom in business operations under the planned economy because government bureaus set strict quota on the production. This situation changed after Mainland China started open reform in 1979 and moved from the planned economy toward the market-oriented economy. Mainland China reformed its urban state-owned industrial sector by implementing a contract responsibility system in 1981 (Zhuo Linong, 2006). Under contract responsibility system, the government signed a formal contract with factory managers and granted them more freedom and authority to do business in the market. This new freedom produced incentives and opportunities for factory managers to engage in fraudulent activities such as misappropriating assets for personal benefit. For example, managers could obtain bank loans from state banks under government administrative order without commercial scrutiny. In the 1990s, these loans proved bad and the total amount was around RMB two trillion (equivalent U.S. \$320 billion). This leaded to forensic accounting services in restructuring and bankruptcy.

As a consequence of outward expansion, stated-owned firms in Mainland China began overseas investment. In 2015, National Audit Office deputy auditor general, Dong Dasheng, estimated that there were RMB four trillion (equivalent U.S. \$640 billion) offshore assets held by giant stated-owned firms virtually unaudited (South China Morning Post, April 16, 2015). Therefore, the Big Four auditors were engaged to investigate offshore assets for possible cases of embezzlement and misuse of funds.

Hong Kong firms are mostly family-owned (Claessens et al., 2000). As first generation owner entrepreneurs retire or pass away, second generation family members often disagree on management of the family business. This arise legal disputes on how to divide the estate, which results in the demand for forensic accounting services to provide litigation support in legal disputes, such as business valuation and expert witness.

Fourthly, growing international business activities in Mainland China and Hong Kong create a demand for forensic accounting services in investigation for corruption and bribery. Foreign investments began in the Mainland China market in the 1980s after Mainland China started opening up in 1979. As a consequence of doing business with Mainland China, corruption and bribery is a threat faced by multinational firms and Mainland China government bureaus (Voreacos, 2013). Furthermore, Mainland China and Hong Kong divisions of the U.S. and U.K. firms are subject to home country law enforcement. As the U.S. enforced the Foreign Corruption Practices Act (FCPA) internationally in 1977 and the U.K. promulgated its U.K. Bribery Act in 2011, there has been a demand for forensic accounting services in investigation of corruptions and bribery. For instance, Mainland China disciplined 180,200 officials and some multinational companies and expatriate executives in 2013 (Xinhua News Agency, 2014).

Fifthly, there is an increasing trend of using technology to improve operational efficiency in the Mainland China and Hong Kong. One example is the pervasive use of computers and IT technology. Companies in the Mainland China and Hong Kong use computer systems to manage information flows and operations in

the electronic environment. Valuable data such as marketing plans and intellectual property are stored in computers and IT infrastructure (such as the cloud). These valuable data can be accessed by criminals, and theft of key intellectual property can cause great economic damage. According to PricewaterhouseCoopers (2014), the instances of cybercrimes increase from 3,105 in 2012 to 5,133 in 2013 in Hong Kong, with e-mail scams costing HK \$760 million in losses (equivalent of ninety-seven million USD). This development causes an increasing demand for forensic accountants specializing in cyber-crime and cyber security.

Legal Factors

This section analyses how Mainland China's code law system and Hong Kong's common law system affect the development of forensic accounting services.

The legal system in Mainland China and Hong Kong is different from the U.S. Mainland China is a code law jurisdiction. Hong Kong was previously under British colonial rule and uses a common law legal system. Although the U.S. is a common law country, it is more litigious than Mainland China and Hong Kong (Hwang and Chang, 2010). In the U.S., business is based on written contracts, and disputes are usually resolved by legal means. Therefore, there is a greater demand for forensic accounting services.

Mainland China started a series of legal reforms in in the 1990s. For example, in the early 1990s, Trademark Law was modified to protect the intellectual property rights of foreign corporation. In 1994, the new Administrative Procedure Law was issued, permitting citizens to sue officials for abuse of authority and malfeasance. In 1997, Mainland China promulgated a new Criminal Law, which covered more than 100 various criminal charges according to different means. In 2005, Company Law was re-written and increased the role of courts. In 2006, a new Enterprise Bankruptcy Law was issued and resembled bankruptcy legislation in developed countries. As a result of the development of laws and legal professions, Mainland China has around 200,000 judges, 160,000 procurators (prosecutors) and 150,000 lawyers (Wall Street Journal, 2008). There is an increasing use of litigation to resolve disputes, which leads to need for litigation-related services, including forensic accounting services.

One area of litigation-related forensic accounting service is expert witness. The demand for expert witness service differs between Mainland China and the U.S. In Mainland China, the court has a database of expert accounting firms that qualify for litigation lawsuits based on their quality and experience in the field. Accounting firms are appointed by the court to prepare written reports on matters such as the value of economic damages and are not usually required to appear in court as expert witnesses. In the U.S., accounting firm staff (usually senior), professors and individuals can be hired by lawyers as experts based on their qualification and experience, and they are used in the courtroom to testify as expert witnesses. Therefore expert report service is more common in Mainland China, while expert witness service is predominant in the U.S.

Historically, Hong Kong was under British colonial rule and follows British common law tradition. After the 1997 return to Mainland China as a special administrative region, Hong Kong has been able to maintain its judicial system independent from Mainland China under "one country, two systems". Currently, laws in Hong Kong consist of Basic Law, common laws and rules of equity, and laws enacted by the legislature. Usually, a new law needs to be passed by the legislative councils through public consultations and three readings. The change in laws through legislation is time-consuming. For example, the old Companies Ordinance was issued in 1911 and amended to keep updated with the development around every ten years. The new Companies Ordinance was passed in legislative council and become effective in 2014. There was no competition law in Hong Kong until the Competition Ordinance is fully effective in December 2015.

During process of law changes, certain aspects of laws have lagged behind and outdated. For example, one area of outdated legislation is Hong Kong charitable organizations. In Hong Kong, there are approximately 6,000 charitable organizations (The Law Reform Commission Charities Sub-committee, 2011). Based on the Law Reform Commission Charities Sub-committee consultation paper, there are four deficiencies in existing laws and regulations for not-for-profit organizations, which could lead to weak governance and thereby frauds/crimes (The Law Reform Commission Charities Sub-committee, 2011). Firstly, there is no statutory definition of charity. The common law interpretation of "charity" in Hong Kong is based on

ancient English legislation (preamble to the 1601 Elizabeth I Statute). This definition has not been updated to meet current conditions.

Secondly, requirements on governance and financial reporting regarding the different forms of charity registrations are inconsistent for different organizational forms. Charitable organizations can register as: 1) a company limited by guarantee under the Companies Ordinance (Cap 622); or 2) unincorporated association under the Societies Ordinance (Cap 151); or 3) a trust; or 4) a statutory body established under a specific Hong Kong ordinance. Charities in the form of statutory bodies and incorporated companies are under stringent control, while charities in form of trusts and societies /associations are subject to limited scrutiny of specific activities. Consequently, charitable organizations can choose the form of a trust/unincorporated association to avoid strict oversight.

Thirdly, the Inland Revenue Department (Hong Kong tax authority) grants tax exemption status, but the Inland Revenue Department itself is not responsible for registration and supervision of charitable organizations. It is likely that inclusion on the tax exemption status list confers "a cloak of respectability and the semblance of official sanction not intended by the Inland Revenue Ordinance" (The Law Reform Commission Charities Sub-committee, 2011, page 24).

Fourthly, charitable fundraising is an area susceptible to frauds because of insufficient control. Some types of fundraising are under scrutiny, while others are not subject to oversight. For instance, fundraising activities such as flag days, street selling and lotteries require the permission of relevant Government departments. These government departments exercise control and oversight in the application of proceeds from fundraising activities. Other types of fundraising activities such as charity auctions, balls, concerts, dinners, and requests for donation by mail or through advertisements do not require either a permit or a license. Consequently, there is an increasing amount of fundraising crimes in charities (The Law Reform Commission Charities Sub-committee, 2011).

In summary, development in legal systems in Mainland China results in more litigation services including forensic accounting. Although the Hong Kong legal framework follows common law tradition, the outdated legislation in certain areas (e.g., charities) provides loopholes for potential frauds or crimes (The Law Reform Commission Charities Sub-committee, 2011), which lead to more forensic investigation services.

One major problem that might slow the growth of forensic accounting involves conflict between the Securities and Exchange Commission (thereafter SEC) and Mainland China-based affiliates of international accounting firms. In 2012, SEC instituted action against the Big Four Mainland China affiliates to produce working papers under discovery. They refused, citing the fact that if they produced the working papers they could be subject to civil or criminal penalties in Mainland China for divulging state secrets. On March 3, 2015, SEC reached a settlement, whereby the affiliates are to produce the records to China Securities Regulatory Agency (thereafter CSRA) and not Public Company Accounting Oversight Board. However, CSRA and auditing firms can undertake redactions under Mainland China's secrets regulations.

The SEC did not dismiss the action. If Mainland China-based audit firms did not produce documents within ninety days, the SEC could impose additional remedies, such as an automatic six-month bar on an audit firm's certain engagement, commencement of new proceedings against a firm or resumption of the current action against all four firms (MacDonald Weiss, 2015). With the consent of CSRA, the audit firms were able to refuse to produce any of the documents. This settlement certainly does not create a level playing field for non-Chinese companies. Obviously, non-Chinese companies hold trade secrets (e.g., Coca Cola), and they are not allowed to withhold documents in discovery. This issue is not settled and may act as a brake on the development of forensic accounting services, particularly in the area of investigation of fraudulent financial reporting.

Social Culture Factors

Zhang Tianxi et al., (1992, page 27) argue that Mainland Chinese accounting "depends not only on its own culture but also to some extent on cultural exchange" with western cultures. Van Hoepen (1995) points out that the influences of culture on accounting are diminishing in Mainland China in the past three periods since 1949. In contrary to Van Hoepen (1995), we argue that the social cultural effect on forensic accounting in

Hong Kong and Mainland China is not diminishing for the following reasons. Firstly, business cultures in Mainland China and Hong Kong are very different from the U.S. In Mainland China and Hong Kong, guanxi (which means social connections) is a significant social culture. Usually, business is done based on trust and personal relationships rather than formal contracts. When disputes arise, a trusted person or party is appointed via guanxi to mediate in the issue, and disputes are usually resolved through mutual compromise.

Guanxi connections, however, can lead to bribery and corruption (Voreacos, 2013). Corruption and "back door", referring to bribery, has been a significant part of business culture. According to the 2014 Corruption Perceptions Index by Transparency International, Mainland China ranks 100th among 175 countries with regard to corruption (smaller figures are preferable) and the U.S. ranks seventeenth. The high level of corruption is associated with the significantly increasing instances of frauds reported. According to the 13th EY Global Fraud Survey (EY, 2013), Mainland China recorded a significant increase in reported frauds from four percent to eight percent in 2014, which include forty-two multinational companies (e.g., JP Morgan, Avon Products and GlaxoSmithKline) under Foreign Corruption Practices Act investigations. This result in a demand for forensic accounting services for investigation of corruption and bribery and anti-corruption consulting for companies.

Secondly, Hong Kong has evolved from an "acquaintance society" to an arm's length one (Fei 1948). In an acquaintance society, the courts play a less important role than networks, and reputations play a dominant role in economic activities. However, the use of the courts/arbitration for dispute settlement has increased as a result of the prevalence of impersonal and contractual relations (Vago, 2006). Mainland China is experiencing an urbanization transition and changing from an acquaintance society to an arm's length one. Thus the demand for use of the courts/arbitration to settle disputes/crimes is expected to increase. This transition will inevitably lead to an increase in the demand of forensic services in the area of litigation support.

Thirdly, there is an increasingly pervasive materialistic attitude in both Mainland China and Hong Kong. The following describes social cultures quite well in both Mainland China and Hong Kong:

"The tendency nowadays is to assess the social worth of any person by what is known as his/her 'market value'; that is, whether their qualifications or profession enable them to secure a highly-paid job complete with every sort of fringe benefit. Also, a person's social rank is measured in terms of status symbols like the kind of home they live in, the car they drive, the clubs they join and the people they meet and dine with regularly. Ostentation is recognized as the surest means of promoting one's own or a company image in public, and conspicuous consumption urged on by advertisements, the public media, and the lavish lifestyles of affluent people is the rule rather than the exception" (Ho Wing Meng, 1983, page 151).

Consequently, this materialistic attitude and social culture suggest an increasing white-collar frauds and crimes based upon the fraud triangle of incentive/pressure, opportunity and rationalization. This change causes an increasing demand for forensic accounting services in the area of white-collar crimes and employee frauds.

Similarly, the number of white-collar crimes is increasing in the U.S., particularly in the banking and financial service industry. Recently, an online survey conducted by a law firm in New York shows that fifty-two percent of Wall Street traders, brokers, investment bankers and other financial service professionals have either engaged in illegal activity or believe they may need to do so, in order to be successful. The survey concludes that these financial leaders:

"have lost their moral compass" and "accept corporate wrongdoing as a necessary evil" (RBC Ministries, December, January/February 2014-15).

Political Factor

Mainland China was founded a socialist country in 1949. From 1949 to 1979, Mainland China was politically connected with and influenced by the previous Soviet Union. During the period, Mainland China was under a system of planned economy. In a planned economy, accounting is used to achieve

national and political goals, which is described as "political accounting" (Cheng, 1980). Since the open reform in 1979, Mainland China started its business and trade activities with Western countries. The country moved toward a market-based economy with Chinese socialist characteristics. Under a market economy, the accounting is used to report financial positions, cash flows and measure operating performance. Andy (1999) and Tang Yunwei (2000) analysed the impact of 1993 financial reporting and accounting reforms on the development of accounting in Mainland China and concluded that political systems affect the development of accounting profession in Mainland China.

There are political elements in accounting profession and accounting education. For example, as a requirement for accounting professionals in Mainland China, a candidate for Mainland China CPA qualification exams must love the country and support the socialist system (Blake, 1995). There is evident political influence in the Mainland China's accounting education as well (Gao, 1995). For example, the undergraduate students of accounting program must study the course of Marxism. This affects the development of accounting profession's independence and professionalism, which to some extent limits the development of forensic accounting profession.

Hong Kong was under British colonial rule until 1997. After the 1997 return to Mainland China, Hong Kong is promised to keep its capitalist system under "one country, two systems" until 2047. Politically, Hong Kong was closed connected with Mainland China and positioned as a gateway to international trades and a bridge of international investment into Mainland China. Many state-owned firms and banks were listed on the Hong Kong stock exchange. These firms are owned by and politically backed by the Mainland China government. As Hong Kong and Mainland China use different political and legal systems, cross-border law enforcement and evidence collection is a significant challenge. It is very difficult for Hong Kong investors to file lawsuits and enforce court rulings against listed firms from Mainland China because the operations and assets of these firms are in Mainland China. Political solutions work as substitutes for legal means to protect investors and to resolve disputes.

Professional Factors

Modern CPA profession in Mainland China developed for only around three decades. The Chinese Institute of Certified Public Accountants (CICPA) was established in 1988. The Law on CPA in Mainland China was issued in 1993. CICPA released its formal Code of Ethics for CPAs (the tentative principles of ethics in 1992) until 2009. By the end of 2014, CICPA had over 200,000 individual members (99,045 practicing members) and nearly 8,300 corporate members (i.e., accounting firms). In 2010, CICPA started to encourage of non-audit services, such as internal control consulting, merger and acquisition, credit investigation.

In addition to CICPA, there existed two professional bodies, which provide forensic accounting related services. The first one is Chinese Appraisal Society (business valuation services) and the other is Chinese Certified Tax Agent (CTA) Association (tax dispute services). Chinese Appraisal Society was set up in 1993, which was a member of International Valuation Standards Committee by 2012. In 2010, there were 29,600 professional Certified Public Valuers, who mostly provide business/asset valuation services. Chinese Certified Tax Agent (CTA) Association was founded in 1995. By 2012, there were 96,540 individual members and around 5,000 corporate members. Qualified CTAs together with legal professionals can help clients to resolve tax disputes with tax bureaus.

Hong Kong Society of Accountants was started in 1973 and renamed as Hong Kong Institute of Certified Public Accountants in 2004. The number of qualified members grew from 500 in 1980s to around 38,700 in 2015. In 2010, HKICPA offers the specialist qualification and designation in insolvency, which is for the traditional bankruptcy and liquidation service. In Hong Kong, HKICPA is the only statutory professional body of professional accountants. For expert witnesses of forensic accounting service, experts must be professional member of HKICPA with relevant experiences.

In contrast, the accounting profession in the U.S. is more developed for its long history and the large number of the profession. American Institute of Certified Public Accountants (AICPA) was founded in 1887. There are around 412,000 members in 2014. AICPA started Accredited in Business Valuation Credentials in 1998 and Certified in Financial Forensic credentials in 2008. A 2009 AICPA survey shows that

seventy-three percent of surveyed CPAs hold forensic accountant credentials (AICPA, 2009). In addition, Association of Certified Fraud Examiners offers certificates in Certified Fraud Examiner (CFE); American College of Forensic Examiners International provides credentials in Certified Forensic Accountants. In summary, the U.S. is more developed in accounting profession and forensic accounting profession.

We summarize the above effects of environmental factors on forensic accounting services in the Table IV. Table IV report that environmental factors affect forensic accounting services in both Hong Kong and Mainland China. Current forensic accounting services are in the areas of resolution in family estate disputes, FCPA enforcement, cybercrime/cyber security, litigation support, bribery and corruption investigation/prevention and white-collar crimes related services in Hong Kong; while current forensic accounting services in Mainland China focus on the field of investigation of offshore assets, litigation support (export report), bribery and corruption investigation/prevention, cybercrimes/cyber security, business valuation, tax disputes and white-collar crimes related services. [see Table IV, pg 530]

IV. Conclusion

We find that three universities/colleges in Hong Kong and nineteen universities/colleges in Mainland China offer forensic accounting courses/programs. In contrast with two universities/colleges in Hong Kong (Seda and Kramer, 2014) and eighteen universities/colleges in Mainland China (Li Silon, 2008) providing forensic accounting courses/programs, there is a marginal increase in the availability of forensic accounting education in Hong Kong and Mainland China.

This research further analyses the effects of fives environmental factors (economic; legal; social/cultural; political; and professional factors) on forensic accounting services in Hong Kong and Mainland China, which suggest an increasing demand for forensic accounting services and thereby an increasing need for forensic accounting education in Hong Kong and Mainland China.

Since Hong Kong adopted International Financial Reporting Standards in 2004, the number of firms listed on Hong Kong Stock Exchange continues to increase. As a consequence of economic development, more firms are listed in Mainland China. The back door (guanxi) social culture coupled with bribery and corruption in Mainland China create a continual need for forensic accounting services. However, international uncertainty regarding the secrecy of audit working papers of mainland firms may stall growth in the call for forensic accounting professionals. Although the accounting profession including the forensic accounting profession in Hong Kong and Mainland China lags behind the U.S. for historical reasons, there is certainly a need for growth in forensic accounting education and growth in the forensic accounting services.

Limitation

This research has two limitations. First, it is possible that the lists of universities with forensic accounting courses/programs in Hong Kong and Mainland China could be incomplete and inaccurate to some extent. This is caused by the use of key-word search of websites. If one university/college in Mainland China does not have a website or does not provide forensic accounting education information in the website, the results will not include the university/college. However, the lists are consistent with the list in Li Silong (2008). This provides some assurance of the lists of universities with forensic courses/programs in Mainland China.

Second, there may be omitted environmental factors or elements of an environment factor. Although we use a framework of environmental factors based on previous literature, it is possible that there are environmental factors not included in this study. This affects the completeness of analyses of environmental factors.

Future Research

Future research could examine the effect of environmental factors on the forensic accounting service in other countries. Future research could also use the questionnaires to survey universities/colleges in Hong Kong and Mainland China on forensic accounting education issues.

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Table I: Hong Kong Universities/Colleges Offering Separate Forensic Accounting Courses Only

College/University	Program Type	Forensic Accounting Courses
Hong Kong Polytechnic University	Bachelor of Business Administration (Accounting Major)—elective	Forensic accounting
Lingnan University	Master of Science in Accountancy—elective	Forensic accounting and fraud examination
ACFE Hong Kong Chapter jointly with Hong Kong University	Continuing Education Training	Forensic accounting

Table IIa: Mainland China Universities/Colleges Offering Separate Forensic Accounting Courses Only

College/university	Program type	Forensic Accounting Courses		
Beijing City University	Bachelor of Accounting	Forensic accounting		
Eastern Asia Administration Institute	High Diploma	Forensic accounting		
Northwest University of Politics and Law	Bachelor of Law	Forensic and investigative accounting		
Southwest University of Political Science and Law	Bachelor of Management	Forensic accounting		
Taizhou Polytechnic College	High Diploma	Forensic accounting		

Source: A web-based survey of Mainland universities/colleges websites in 2015.

Table IIb: Mainland China Universities/Colleges Offering Forensic Accounting Diploma and Degree Programs

College/University	Program Type	Forensic Accounting Program Major Courses
Bohai University	Bachelor of Management	forensic accounting; forensic accounting case studies; civil procedure law of China; criminal laws; criminal procedure law of China; business valuation
China University of Political Science and Law	Master of Law	civil procedure law of China; tort laws; constitutional law; criminal laws; administrative laws; civil procedure law of China; criminal procedure law of China; family laws; history of Chinese laws; company laws; contact laws; intellectual property laws; taxation; securities laws; international laws; advanced forensic accounting; investigation and evidence collection; bankruptcy laws; internal audit and internal control; tax planning; investigation for economic crimes; cyber security for e-business
East China University of Political Science and Law	Bachelor of Accounting	economics; introduction to management; management information system; econometrics; financial accounting; auditing; financial management; taxation; financial statement analysis; accounting frauds- case studies; forensic accounting; economic laws; rules of evidence; computer forensics; securities law; banking laws; accounting laws; laws of commercial documents
Fudan University	Master of Professional Accounting	advanced auditing; business ethics and code of ethics for accountants; advanced financial accounting; advanced financial management; advanced managerial accounting; management information system; international accounting standards; China taxation; internal control; tax planning; business laws; quantitative method (big data analytics); merger and acquisition; financial markets and financial derivatives
Hainan Vocational College of Political Science and Law	Three-year Diploma	introduction to forensic accounting; financial accounting practice; introduction to theory of laws; rules of evidence; economic laws; cross-examination in forensic accounting; accounting in the digital environment
Heibei Polytechnic College (Now part of Langfang Normal College)	Bachelor of Management	civil procedure law of China; writing for forensic reports; business valuation; tax practice; capstone project
Hunan University of Finance and Economics	Bachelor of Law and Management	criminal laws; civil laws; business laws; company laws; laws of accountants; introduction to forensic accounting; fraud examination; forensic and investigative accounting; tax laws; legal risk management

JiangXi University of Finance and Economics	Bachelor of Law	theory of laws; criminal laws; civil laws; company laws; financial accounting; intermediate financial accounting; advanced financial accounting; financial management; auditing; fraud examination; investigation of economic crimes; forensic accounting; writing for forensic reports; accounting information system
Nanjing Audit University	Bachelor of Law	theory of laws; constitutional laws; criminal laws; civil laws; criminal procedure law of China; civil procedure law of China; company laws; intellectual property laws; contract laws; financial accounting; principles of economics; accounting information system; forensic accounting; auditing; investigation of economic crimes; rules of evidence
Nankai University	Master of Professional Accounting	advanced auditing; business ethics and code of ethics for accountants; advanced financial accounting; advanced financial management; advanced managerial accounting; internal control; tax planning; legal and financial issues of merger and acquisition; management information system; big data analytics; risk management; quantitative method (data analysis)
Yunan University of Finance and Economics	Bachelor of Accounting	intermediate financial accounting; intermediate financial management; auditing; accounting information system; advanced financial accounting; auditing: case studies; introduction to forensic accounting; forensic and investigative accounting; rule of evidence; taxation; criminal procedure law of China; civil procedure law of China; legal right; tax planning; financial statement analysis
Zhejiang University of Finance and Economics	Bachelor of Management	criminal laws; civil laws; administrative laws; criminal procedure law of China; civil procedure law of China; contract law; company law; insurance law; taxation; auditing; rules of evidence; investigation of economic crimes

Source: A web-based survey of Mainland universities/colleges websites in 2015.

Table IIc: Mainland China universities Offering Forensic Accounting Research Degree Programs

College/University	Program Type	Forensic Accounting Research Areas
Capital University of Economics and Business	Master of Management	forensic accounting standards; forensic accounting education; comparison of forensic accounting between Mainland China and other countries; forensic accounting services innovation and etc.
Renmin University	Master of Law at Law School	regulations and standards of forensic accounting practices and legal risk management; cross-examination in crime investigation and etc.

Source: A web-based survey of Mainland universities/colleges websites in 2015.

Table III: Summary of Elements of Environmental Factors

Factors Paper	Economic	Legal	Social/ cultural	Political	Professional
American Accounting Association (1977)	Economic system; Stage of Economic development	Objectives of financial reporting; Source of or authority for accounting standards		Political system	Education, Training & Licensing; Enforcement of Ethics & Standards; Client
Choi and Mueller (1984)	Nature of business ownership; Differences in size and complexity of business firms; Level of sophistication of business; Speed of business innovation; Stage of economic development; Growth pattern of an economy	Legal system; Degree of legislative business inference; Existence of specific accounting legislation	Social climate	Political system	Status of professional education and organisation
Nobes (1984)	Provider of finance	Legal system	Cultural		The profession
Radebaugh and Gray (1997)	The nature of enterprise ownership; The business activities of the enterprise; Sources of finance and the stage of development of capital markets; The stage of economic growth and development	The nature of taxation system; The nature of the legal system; The nature of accounting regulation	The social climate; The culture	The nature of political systems	The state of accounting education and research

Table IV: Summary of Effects of Environmental Factors on Forensic Accounting Services

	Hong Kong		Mainland China		the U.S.	
Region Factor	factor	related forensic accounting services	factor	related forensic accounting services	factor	related forensic accounting services
	rapid economic growth; maturity stage of economic development	limited demand for forensic accounting services	rapid economic growth; transition from a planned economy to a market-based economy	limited demand for forensic accounting services	slow economic growth; maturity and mass consumption	more demand for forensic accounting services
Economic	Around 1,630 listed firms on the Hong Kong stock exchange	general forensic accounting services for listed firms	2,600 listed firms on the Shenzhen and Shanghai stock exchange	general forensic accounting services for listed firms	over 5,000 firms listed on the NASDAQ and New York Stock Exchange	general forensic accounting services for listed firms
	second generations of family-owned firms dispute on estate	litigation support (business valuation, expert witness)	state-owned firms	restructuring and bankruptcy; investigation of offshore assets (e.g. embezzlement; misuse of funds)		
	international firms	FCPA and U.K. Bribery Act	International firms	FCPA and U.K. Bribery Act		
	Use of IT	cybercrime; cyber security	use of IT	cybercrime; cyber security	use of IT	Cybercrime; cyber security

Legal -	common law	litigation support	code law; development of legal system	litigation support	common law	litigation support
	outdated legislation (e.g. potential NPOs fund raising frauds)	fraud investigation; anti-money laundering	accounting expert not usually to appear in court	expert report more common	qualified expert testify in court	expert witnesses more common
	guanxi culture	bribery and corruption investigation; anti-corruption consulting	guanxi culture	bribery and corruption investigation; anti-corruption consulting	arm's length transactions; use of courts to settle disputes	litigation support
Social/cultural	arm's length transactions;	100	urbanization;			
	use of courts to settle disputes	litigation support	use of courts to settle disputes	litigation support	urbanization	litigation support
	materialistic attitude	white-collar crimes	materialistic attitude	white-collar crimes	materialistic attitude	white-collar crimes
Political	capitalist under "one country, two systems"	political solutions to resolve disputes for listed state-owned firms from Mainland China	politics influence on accounting standard-setting, accounting profession and education	limit the forensic accounting profession's professionalism		
	HKICPA the only statutory qualification for CPA		CICPA the only statutory qualification for CPA		AICPA - Certified Financial Forensics	forensic accounting services
Professional	HKICPA designation of liquidation	traditional liquidation service	Certified Business Valuation Analysts	traditional business valuation service	ACFE - Certified Fraud Examiners	fraud examination
			Certified Tax Agent	traditional tax disputes service		

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