How do accountants remain relevant? The future of Public Practice.

A thesis presented in partial fulfilment of the requirements for the degree of

Master of Business Studies in Management

at Massey University, Manawatū, New Zealand.

Angus Stuart Ogilvie

2019

Abstract

Small accounting practices in New Zealand are slated to come under increasing stress as computerisation impacts their relevance. Artificial intelligence threatens to undermine any monopoly they possess in terms of specialist knowledge. Whilst firms of all sizes will be impacted, smaller practitioners are likely to be especially vulnerable as they tend to have a singular focus on ensuring their clients are compliant with Inland Revenue. Indeed, they commonly refer to this work as 'compliance'. This involves bookkeeping, annual accounts production and tax returns, all processes that look set to be automated. Professional bodies within the accountancy discipline are stressing the need to move from providing compliance services to offering business advice. The research question asks how accountants remain relevant during a period of unprecedented technological change to the profession. This thesis uses a mixed-method research methodology to understand the current context that the profession operates in and how accountants in practice perceive their future relevance. Institutional Theory, and the concept of scripting, has been employed in the analysis of the research data to analyse how practitioners are actively considering their future in light of technological change. Accountants in practice perceive a positive future for themselves. The way they organise their practices is likely to change substantially with an increased use of technology and the rise of contractors at the expense of the traditional workforce. One thing is likely: we will need fewer accountants in the future.

Preface

"I am always ready to learn although I do not always like being taught".

Winston Churchill

I practice as an accountant in Auckland, helping small to medium sized business with their statutory responsibilities and along with advice on running their businesses. Of those two areas, the former is likely to be impacted significantly in the medium term. The future of my profession is raised frequently, both by professional bodies and suppliers alike. As a result, the topic and research process has been immensely fulfilling and have forced me to confront some of my assumptions by reflecting on the thoughts of other practitioners.

I am immensely grateful for the practitioners who shared their insights on the change occurring for accountants in practice. The support of CPA Australia in recruiting these participants, and in particular Rick Jones, the New Zealand country manager, was outstanding.

For me, the literature review was particularly interesting. Both my accountancy degree and the later studies towards my professional designation did not in any way touch on the future viability of my chosen career. Perhaps they should have. It was not until I became an accountant in practice some seven years ago that these questions started to be raised. To see such an array of scholarship on institutional theory and the professions has been both engrossing and, at times, confronting.

I have been particularly lucky to attract two supervisors from very different disciplines. Associate Professor Craig Prichard, my primary supervisor, lectures in Management, with a keen interest in institutional analysis. Associate Professor Nives Botica-Redmaine lectures in Auditing but is also heavily involved in the leadership of a professional body. Both were intrigued by the topic but from very different angles. The ensuing debate and conversation has been immensely enjoyable. I am very thankful that I was able to attract two such passionately interested academics and thank them for their sagacity and patience.

I would be remiss if I didn't thank Yvette for being so understanding during the last eighteen months. Weekends spent writing research meant many hours away and she has been very understanding throughout. Her support has been essential and for that I'm immensely grateful.

Angus Ogilvie

December 2019

Table of Contents

Chapter One Introduction

Accountants in public practice are facing a period of unprecedented change. Artificial intelligence and machine learning promise to make a significant impact on the workplace. The nature of accountancy, with its heavy reliance on numbers, lends itself to considerable disruption. Many of the tasks performed by accountants are likely to be automated. Most public practitioners derive a substantial amount of their revenue from compliance, the process of compiling financial statements and producing tax returns. If compliance work is to be automated, accountancy firms will need to adapt and acquire new revenue streams in order to survive.

Threats to the traditional revenue streams of accountancy practices are truly global. The purpose of this thesis is to examine the current situation for SME firms in New Zealand, the steps they may or may not be taking to counter any technological threats and how they perceive the future. The research question relates to how they will remain relevant in a period of such substantial change.

This chapter will serve as an introduction to the New Zealand SME accounting environment. We will examine the peculiarities of professional membership in New Zealand, seek a broader definition of the concept of professions and look at some research on the future of professions in general. The threat posed by artificial intelligence and machine learning will also examined and some recent literature which points to some significant challenges to accountancy as a profession in the years to come.

Before considering the impact of technological change on the New Zealand SME accountancy sector, it’s useful to set the scene by examining the industry as it stands today.

1.1 Public Practice Accounting & Professional Membership in New Zealand

In the New Zealand context, the Big 4 accounting firms (PwC, EY, Deloitte and KPMG) dominate the professional landscape within public practice. Public practices providing accounting services to the public as opposed to accountants who work within organisations. Large corporates, local and central government agencies all patronise these firms. The Big 4, as they are colloquially known, specialise in auditing large companies trading on the NZX, the local stock exchange. They also offer a whole raft of non-statutory services to the top end of town, from consultancy to IT services.

The second-tier firms such as BDO, Grant Thornton and Staples Rodway, offer a branch network throughout New Zealand. They assist large nationwide, often privately held organisations with accounting and tax services as well as audit.

By far the most numerous of accounting firms are those with one to four partners specialising in the small to medium enterprise space. These SME firms complete financial statements and tax returns for high net worth individuals, trusts and companies. They act for a raft of different industries from sole traders to multi-director firms. They usually only have one office in one geographical location.

Many accountants in practice in New Zealand are members of professional bodies such as Chartered Accountants Australia and New Zealand and CPA Australia. Both bodies require students to sit additional post-graduate examinations and have strict oversight of professional practice with regular independent reviews. Members must adhere to ethical standards and face disciplinary action if they are found to have diverged from ethical practice.

The development of professional accountancy in New Zealand therefore conforms to the steps laid out by (Ferguson & Ramsay, 2010) in defining a profession. That is:

1. Establish a set of widely acceptable professional qualifications;
2. Establish barriers to entry, or occupational closure;
3. Establish professional associations; and
4. Establish and enforce a professional code of ethics.

However, accountancy in New Zealand differs from other professions, such as law or medicine, in that there is no legislative requirement for accountants in public practice to belong to a professional organisation. This is not the case in other commonwealth jurisdictions. For instance, all Australian accountants in public practice must be members of professional bodies (OECD, 2018). The New Zealand context is comparatively unregulated. Indeed, anyone with more than ten clients who is deemed to be of good character can register with Inland Revenue to act as a Tax Agent. The exception is for the field of auditing where auditors must either hold a licence under the Auditor Regulation Act 2011 or be registered auditors through professional bodies such as CPA Australia or CAANZ. Nevertheless, professional membership predominates amongst accountants in practice. Professional accounting bodies enjoy approved advisor group status with the Inland Revenue which, amongst other things, confers limited rights of non-disclosure on behalf of their clients (Department, 2018).

So why might someone offering accountancy services to the public join a professional body if there is no legislative requirement to do so? Research has shown that there are two main benefits of joining a professional organisation: they are either tangible, or symbolic (Markova, Ford, Dickson, & Bohn, 2013). Tangible benefits include obtaining certification, ongoing professional development, networking with colleagues, access to professional knowledge, guidance and training. Symbolic benefits include social recognition of professional identity, reputation, international recognition and career opportunities. The study was also important in identifying generational differences. Older members look for a stronger tangible justification for professional membership, with younger members favouring symbolic reasons.

1.2 What defines a Profession?

By the 1990s, as the interest of sociologists in the study of professions began to wane, management scholars became interested in large professional organisations and how they might differ from corporations, if at all (Suddaby & Muzio, 2015). Initially scholars tried to understand unique characteristics of professional services firms (PSFs) and explain their persistence. Mintzberg (1979) described professional organisations as representing a “professional bureaucracy” characterised by clear lines of authority and standardised administrative practice. Further research identified other characteristics such as knowledge intensity and low capital requirements (Von Nordenflycht, 2007). Jurisdictional control, the nature of knowledge and nurture of client relationships are also seen as key characteristics in differentiating professions from other occupations (Malhotra & Morris, 2009). Jurisdictional control is perhaps another way of framing the Weberian concept of social closure where professionals organise themselves to set barriers to enter the profession.

Traditionally the idea of firm growth, profitability and innovation, characterised by entrepreneurship, was seen to be inconsistent with the ethical and regulatory imperatives of the technocratic professional bodies that they belong to (Mintzberg, 1973). More recently, scholars have tempered this view, arguing that some entrepreneurship is evident amongst professionals who start-up practices. They operate in a paradox in that they practice in a highly institutionalised context whilst by necessity operating as entrepreneurs (Stewart, Castrogiovanni, & Hudson, 2016a). Certainly, market forces are more prevalent for these start-up firms.

1.3 Characterising the Small Firm

The smaller firm tends to have just one or two principals, so decision making is largely centralised as a locus of control. Paradoxically, there is a strong correlation between technocracy and entrepreneurship. Variables contributing to this entrepreneurship in “simple firms” appear to be leader related: they are personality, power and knowledge related to technical advice (Miller, 1983). Research has shown that professional identity provides individuals with a sense of belonging whilst being an entrepreneur provides the individual with a sense of distinctiveness (Poutanen & Kovalainen, 2016). Competitive strategy is formed often by just one person’s knowledge of what the client wants, sources of supply and competitors’ strategies. If the leader in a “simple firm” has the wrong personality or inadequate power, this will have a direct and negative impact on entrepreneurial enterprise.

1.4 Technology as a Threat

As early as the 1970s, academics observed the potential threat of computerisation. 'Deskilling' had the potential to erode the professional's control of expert knowledge. The command of knowledge, which sets the professional apart, could no longer be assured (Haug, 1975). The advent and growth of artificial intelligence and machine learning has resulted in a variety of alarming projections for the future of the accountancy profession. Various studies all point to the decline in the number of jobs in accountancy as computers take over the role of assembling and ordering data. Whilst the threat is not immediate, commentators predict a catastrophic reduction of jobs in the next 10 years (Frey & Osborne, 2017). Most of the academic literature identifies the possession of knowledge as a key characteristic of a professional. The paradigm shift occurring is that computerisation is likely to capture that knowledge for the first time, rendering technocratic skills redundant.

With small practices focused on compliance, the outlook could be seen as bleak. The challenge for the practitioner is to remain relevant when the bulk of their current source of revenue disappears. In the absence of accounts production, or "compliance", this will mean offering advisory services to business. The reality may be that these practitioners lack either the skill or inclination to adopt this role (Marriott & Marriott, 2000).

1.5 The Future of the Professions

There have been periodic warnings over the last two centuries that automation and new technologies would wipe out a large proportion of middle class jobs (Autor, 2015). Autor sites the Luddite movement as perhaps the most celebrated. He also points to the 1964 Blue-Ribbon National Commission on Technology, Automation and Economic Progress established by President Johnson. This commission concluded that general demand for goods and services is a far more important influence on jobs than automation. Technology, they asserted, eliminates jobs, not work. Of note, one of the conclusions of their work was to propose a guaranteed minimum income which has become fashionable again.

With the impact of technological change forecast to have a significant impact of the numbers of practitioners, speculation has naturally turned to the future of the professions. Susskind (2015) asserts that there are two possible futures for all professionals. The first proposition is that professionals continue to work very much as they do today, but more efficiently, aided by technological advances in the much the same way as they have done since the nineteenth century. The second proposition is that an increasing number of very capable systems will displace much of the work of traditional professionals. In the short to medium term this will be done in parallel. In the longer term, the professions will be dismantled as new and better ways are found to share expertise in society. The authors believe that the latter outcome is more likely, although they stress this is likely to be incremental rather than revolutionary. Moreover, they pose questions about whether the "capable, non-thinking machines" should be controlled by the many or the few, whether professional expertise should be made available at little cost or greater expense and whether it should be "liberated or enclosed".

In a refreshingly frank response, one academic has observed that popular commentators, journalists and business consultants seem to devour the bleak picture of professionals being replaced by machines with "Frankensteinian relish" (Wajcman, 2017). She dismisses Susskind's dystopian thesis in favour of the influential work *The Second Machine Age* (Brynjolfsson & McAfee, 2014). These authors assert that the most efficient future lies with machines and humans working together. The authors are optimistic about the future and believe that jobs will be created as part of the digital revolution although they caution that government investment in education and infrastructure is needed to avoid polarisation in the labour market. Legislative intervention may intervene to restrict job-destroying technologies. As digital technologies race ahead, there is the very real danger that many workers will be left behind including many service jobs and knowledge work (Brynjolfsson & McAfee, 2015). This is tempered with the view that humans are vastly superior to computers when it comes to common sense and coming up with useful new ideas. There is certainly ample scope for policy makers, business leaders and academics to engage in scenario planning.

There is little doubt that the advent and scope of artificial intelligence for public accountants represents quite radical change, as it does for all professionals. Revolutionary and evolutionary change differ largely to due the scale and pace of upheaval and adjustment (Greenwood & Hinings, 1996). For instance, Xero software has been more evolutionary than revolutionary, with steady incremental improvements rather than one major change that would exert a revolutionary change on the profession. The authors contend that changes will be largely exogenous and outside the power and control of the profession. Change will require participants to learn new behaviours and interpretations as they change from one archetype to another. This may be constrained by accountants who operate in a highly institutionalised setting (Greenwood & Suddaby, 2006). Organisations may change their goals or develop new practices, but the structure of the profession may impinge on their ability to change in the longer term (DiMaggio & Powell, 1983). Here, they assert that the Weberian 'Iron Cage' is a useful analogy.

1.6 Artificial Intelligence & Machine Learning

The term 'artificial intelligence' (or simply AI) was first coined back in 1956 by Dr John McCarthy, a mathematician at Dartmouth University in New Hampshire. McCarthy organised a conference to discuss the concept that any area of learning could be precisely described so that a machine might simulate it (Kline, 2011). The term ‘artificial intelligence’ is not easily defined. Many definitions tend towards alignment with the concept of creating computer programmes or machines controlled by computers that are capable of behaviour we would regard as intelligent if exhibited by humans (Kaplan, 2016). The problem with such a definition is that it is subjective. We are immediately faced with defining or measuring human intelligence. Moreover, machines can perform a whole plethora of tasks that humans can’t. Computers already massively outperform humans in analysing data, both from their ability to handle vast quantities of data and the time taken to analyse it.

Kaplan (2016) defines artificial intelligence, indeed intelligence in general, as the “ability to make generalisations in a timely fashion based on limited data”. By inference, the broader the domain of any given application, the quicker a conclusion can be drawn from minimal information, and the more intelligent that behaviour becomes.

The AI Forum of New Zealand (2018) defines AI as “advanced digital technologies that enable machines to reproduce or surpass abilities that would require intelligence if humans were to perform them”. They include machine learning, where “a machine (has the ability) to keep improving its performance without humans having to explain exactly how to accomplish all the tasks it’s given…We can now build systems that learn how to perform tasks on their own” (Brynjolfsson & McAfee, 2017).

There are already a vast array of applications for artificial intelligence. Kaplan (2016) points to the availability of software within the legal profession to handle discovery, the process whereby plaintiffs and defendants access documents from either party to find pertinent evidence to a case. The documentation can be voluminous. Currently the job of reading through the raft of documents is normally the domain of the recent graduate. The innovation of “e-discovery” has the potential to perform this mind-numbing task at speed, performing everything from simple matching of phrases to very complicated semantic analysis of the text.

Khader, Yoon, and Lashier (2016) discuss the increasing automation of retail pharmacy by using a Robotic Prescription Dispensing System (RPDS). At its core is the goal of maximising the number of prescriptions a pharmacy can handle whilst reducing operational costs. The RPDS automates drug dispensing using a robotic unit. This machine stores, counts and releases tablets under the control of the computer. The concept is to minimise the repetitive tasks associated with dispensing scripts to allow pharmacists to spend more time communicating and consulting with patients.

In dentistry, a robotic system of computer-assisted surgery for dental implants has been introduced. The machine allows the dental surgeon to see a three-dimensional visual representation of the patient’s mouth. The machine precisely locates the area where the dentist should drill through a collaborative robotic arm. The dentist still controls the drill but it is not a stretch to believe that one day even that part of the process could be automated (Outsourcing, 2017).

Accountancy is not immune from the advances of artificial intelligence. Xero announced that they are actively pursuing machine learning to automate repetitive tasks by reducing the amount of time spent collecting and entering data into their platforms. For instance, users can send supplier’s invoices to their Xero account and have all the information prepopulated in Xero - including the amount of the bill, the due date and the supplier’s details – all by using data extraction (Daish, 2018). AI is very much in its infancy at this stage.

The impact of artificial intelligence and new technologies can be seen as disrupting the professions. The development and introduction of these new technologies makes the profession far more vulnerable to commoditisation. The role that the professional once had is eroding. Fischer (2015) calls this the “end of expertise”. For years professionals were highly regarded for their knowledge. The democratisation of this information is making it much easier for the layperson to access and understand. Maister, Green, and Galford (2004) contend in their book “The Trusted Advisor” that there were a number of key attributes that build trust in a profession. They stressed credibility, reliability, intimacy and self-orientation. Fischer argues that credibility is being commoditised via popular access to expertise and artificial intelligence. Reliability is actually being enhanced by artificial intelligence and the consumer knows this. Fischer believes that rapid technological advancement has the potential to lead to the subordination of the professional in favour of the owner of the technology. Institutional logics are an important consideration here. The impact of corporate control over the professions is a very clear risk and may weaken traditional fiduciary oversight by practitioners.

By way of antidote to the relentless progress of artificial intelligence, Fischer proposes that intimacy and self-orientation cannot be subject to algorithms. Intimacy refers to the client or patient feeling comfortable discussing a matter of concern with the professional. Self-orientation refers to the feeling that the client or patient believes that the professional actually cares deeply for them. In essence, the professional has a future if they can master these softer skills.

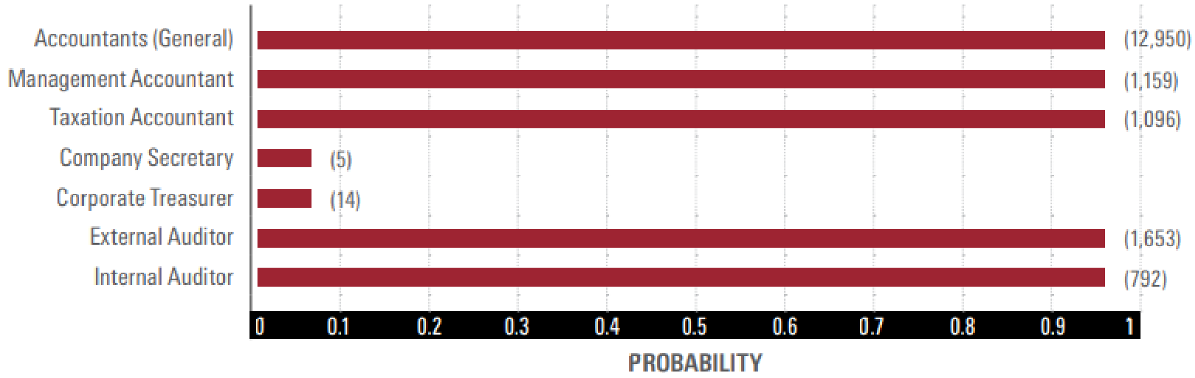
In summary we can see the potential that AI has to make revolutionary change in the professions, and more particularly accountancy. To date, advances are evolutionary rather than revolutionary. Academics are signalling that the role of the professional is declining and that we may be witnessing the decline of expertise in the professions and the rise of the technology companies. Where the professional has an advantage is in utilising their uniquely human skills of intimacy to build trust with their clients. We now move to examine how AI may impact small to medium sized accountancy practices.

1.7 Change in Professional Small Practice Accountancy

There is a dearth of academic research on small practices despite these enterprises making up the most numerous part of public practice, particularly in the New Zealand context. Most international research has focused on examining professional associations and related organisations. There is a necessity to expand fieldwork on smaller firms in order to grasp variation across social, organisational and economic context (Ramirez, Carter, Stringfellow, & Maclean, 2015).

The practice of accountancy is still rooted in the *Italian method* of double-entry bookkeeping published by the Venetian monk and mathematician Luca Pacioli back in 1494 (Gleeson-White, 2011), yet the computer information technology systems and the complexity of modern accounting would be unrecognisable to him. All modern accountancy is highly dependent on computers and software. As a result, accountancy and auditing are predicted to be highly susceptible to automation. In one study, the authors found a 94 per cent chance that practitioners would be impacted by computerisation in the next ten to twenty years (Frey & Osborne, 2017). Already, mundane tasks that used to require human input by knowledge workers can be performed by computers. This is made possible by faster processor speeds and memory capacity, machine learning and speech recognition technology (Manyika et al., 2013). Automation of tasks traditionally performed by bookkeepers and accountants could soon be thought of as another sort of outsourcing, transferring jobs from the physical to the virtual economy (Arthur, 2017). Whilst there is a dearth of research In New Zealand, one study has found that all but two roles within the accounting professions are at risk of job losses due to automation (New Zealand Institute of Economic Research, 2015). The two exceptions, corporate treasurers and secretaries, are commercial roles common to large organisations. Neither specialisation is relevant to public practice. Although the number of New Zealanders employed as accountants has been increasing (by 6% between 2012 and 2014), the trend is expected to reverse over the next decade based on New Zealand data using the analysis set out in the work by Frey and Osborne (2017).

FIGURE 6: NUMBER OF ACCOUNTANTS AT HIGH RISK OF AUTOMATION BY ROLE (BASED ON NEW ZEALAND CENSUS DATA)
(Numbers in brackets represent the number of accountants at high risk of automation)



SOURCE: Adapted from NZIER, Statistics New Zealand[17], based on Frey and Osborne[18]

The authors point to the field of data analytics as the one professional service expected to flourish in this era of disruptive technologies. The report concludes that ability for many professions to survive will depend on the acquisition of technical knowledge, critical business thinking, strategic insight and relationship management.

The report asks a number of salient questions of stakeholders including:

- Is your business strategy fit for today's world?
- Does your digital strategy deliver?
- Are you experimenting with new technologies?
- Have you automated your business processes?
- Do you know what lies ahead? (or in other words, have you built awareness of the paradigm shift to come?)
- Is retraining an option, to broaden your skill set? Are your team upskilling?
- Are you a fast adopter in order to realise any new income source and cost savings that might come about from new technologies?

This report mirrors many overseas that advocate that public accountants operating in the SME sector need to move from providing accounting data to interpreting that data and providing timely advice. Research in the United Kingdom has shown that business owners' demands for a public accountant's skill is driven by regulatory requirements. They perceive little value in the production of statutory accounts and lack the financial skill to understand or use the information produced (Marriott & Marriott, 2000). The traditional relationship is therefore one based on a necessary evil. The business owner effectively outsources the task of compiling annual accounts and tax returns because they lack the skill to do it themselves and failure to comply involves serious repercussions. The coercive power of the state largely underpins the exchange.

Encouragingly, there is evidence that there is considerable demand for advisory services from SMEs, covering strategy, management accounting, budgeting, cash flow and associated services. Carey (2015) differentiates the traditional role of compliance and the emerging role of advisory as statutory and non-statutory services. Of the latter, he defines it as business advice to support the information needs of management. By inference, the statutory reporting is, therefore, reporting to satisfy the legislative requirements of government, specifically taxation. Mole (2002) argues that for business advice to be successful, personal relationships between the advisor and the client need to exist allowing for both "explicit and implicit assumptions and obligations to be explored." Mole argues that agency theory can be utilised to explain how the SME owner(s) overcome problems of adverse selection and any moral hazard regarding the benefits of business advice provided by a public accountant. He concludes that advice is generally used to fill gaps of internal capacity within a SME.

Marriott and Marriott (2000) go on to suggest that the secret to growing advisory services lies with presenting financial information in a form more likely to be understood and used by the recipient. They contend that many owner-managers lack financial skills and don't understand information prepared in financial reports. The challenge is for the practitioner to tailor information in a way that "adds value" to the business instead of placing all the emphasis on producing statutorily compliant reports. Ramirez (2009) asserts that the role of the traditional accountant is being slowly but surely shifted to that of an advisor to a firm, or client.

However, a gap exists between accountants' views that they possess the necessary competence to provide advice, and owners of SMEs who have slightly more mixed views (Blackburn, Carey, & Tanewski, 2010). There is no guarantee that accountants who already have established relationships from providing compliance services such as tax returns and annual accounts will automatically lead to the same clients purchasing business advice from them. It became apparent that there needs to be several other factors satisfied when purchasing advice. Blackburn et al. discovered in their field work that there was a real disconnect between the accountant's view of their skills and knowledge and their client's view of their ability. The need to convince clients that they have the necessary business knowledge to provide meaningful advice seemed to be a key consideration here.

There is some research to suggest that the relationship between small and medium business owners and their professional advisors may be fraught. Business owners are typically highly independent, and they may perceive that having to rely on external business advice may be creating dependency, or worse, an admission of failure. In addition, rejection of business advice is common when the business owner has a strong perception of their own competence or where they fear that any intimate discussion of their business with an external party may precipitate disclosure of sensitive information to competitors (Dyer & Ross, 2007).

Of perhaps more concern is the body of research that cites that many small to medium business owners have a negative impression of professional advisors. Business owners perceive that professional advisors do not offer practical advice, do not offer value for money, or simply do not understand the world of small businesses (Gibb, 1997). They have no knowledge of the customers, suppliers or the networks that the small businessperson engages with on a day-to-day basis. Few advisors have any knowledge of running a small to medium business and may not be acquainted in any way with the particular industry the small business is operating in.

It would seem that the only way to mitigate these perceptions is the presence of trust. Where a small business owner has a high level of trust in an advisor, there is a greater chance of a successful relationship. This is due in large part to advice being an intangible service (Gooderham, Tobiassen, Døving, & Nordhaug, 2004).

We might presuppose that advisory is a revenue stream that grows from the longevity of a relationship. In this regard the accountant would hold an edge over the consultant due to an ongoing relationship and regular interaction. This supposition was not borne out by the survey results, however. Gooderham et al. (2004) found that the presence of trust was solely as a result of the quality of the compliance services received. It became a precondition for a small businessperson to consider advisory services from an accountant. If trust exists, the desire of the small to medium business owner to seek advice is then closely correlated with their desire to grow and develop their firm. The authors conclude that if these two conditions are met, there is a significant increased tendency that owner-managers will use non-statutory services from authorized accountancy firms.

With the inexorable advance of technology, practitioners are arguably at a crossroads. Compliance as a proportion of a firm's revenue is likely to decline markedly over the next few years as computers take over the traditional tasks of accountants in practice. Some industry commentators and researchers alike point to a dire future for the profession. Yet we have seen that artificial intelligence is not able to replicate some uniquely human characteristics such as client intimacy and trust. The latter appears to be essential in developing new revenue streams for accountants in practice. There is latent demand for business advice in the SME sector. In the following chapter, we examine the academic literature that underpins the analysis of organisations and accountancy in particular. This will form the basis of the subsequent research. The research question asks how SME accountants in practice can remain relevant at a time of unprecedented change, and how this will be achieved. In order to analyse that data, we must first start with an academic foundation.

Chapter Two Literature Review

This chapter will critically analyse the extant literature that relates to the area of the professions along with institutional theory that is commonly used to analyse professions. This involves examining the institutional logics that inform individuals' actions as they make sense of their environment. In turn, these logics place constraints on the behaviour of these actors. These logics impact accountants as part of their profession, drawing competing priorities of being true to their fiduciary responsibilities whilst at the same time needing to act more like a corporate to remain viable. Making sense of change, or sensemaking, is an important process in contemplating the changing environment with the resultant scripts that actors employ.

2.1 Professional Theory

As we discovered in the introduction, accountants classify themselves as professionals. It is useful to start any review of the academic literature with a focus on what defines a profession and why individuals group together in a professional structure. Academics have studied the professions since the 1950s. Five traits were traditionally identified as being unique to the professions: a systematic body of theory, professional authority, sanction of the community, a code of ethics and a professional culture. This 'list' was enhanced throughout the 1950s to include other characteristics such as loyalty to colleagues, rewards based on work achievement, a fiduciary relationship with clients and a social calling (Suddaby & Muzio, 2015).

For much of the 1970s and 1980s, sociologists developed a keen interest in the professions. Webarian analysis was a popular way of framing professional practice. Professional bodies govern entry and boundaries within the specialty, a form of Weber's social closure. Weber argued that closure led to opportunities in the market for monopolisation by status groups (Murphy, 1986).

Professions developed over time to control an occupation rather than through any altruistic motivation, although the two are not necessarily mutually exclusive. Professions use the language of altruism with phrases such as a social calling when in fact the professions occupy an occupational category based on economic privilege stemming from elitist power (T. J. Johnson, 1972).

It follows then that professionalism therefore becomes the occupational control of work which is both logically and empirically distinct from consumer or managerial control (Freidson, 1999). Professions seek to suspend the operation of open markets for labour by controlling the right to determine who is allowed to claim and sell expertise (Ackroyd, 2016). In his seminal work, Johnson refers to "credentialism" as the means by which professional bodies confer benefits and privileges on the few whilst denying access to the many. This may be enhanced by rules may be enshrined in law and policed by the coercive authority of the state (Parkin, 1979).

There were critics of this idea of monopolisation. There is ample evidence to suggest that whilst professions might provide some sort of protection, incomes vary widely within professions. Moreover, professionals do not merely act out of self-interest but dedicate themselves to socially useful reforms (Brooks, 1990).

Other research points to a co-dependence between the nation state and the professions. Professions may depend on the state in order to enforce jurisdiction and to accredit members, but the state also relies on professions to construct stabilising institutions, particularly in the fields of justice and health (Suddaby & Muzio, 2015). This has been referred to as a “regulatory bargain” (Puxty, Willmott, Cooper, & Lowe, 1987).

There is more recent scholarship which points to the decline in the power of the professions by weakening the effects of social closure and economic monopoly (Hanlon, 1996). Computerisation is impacting the intensity of work. With the advent of the internet and mobile technologies, clients are beginning to shop around for better deals (Ahroni, 1999). Statutory protection is being eroded worldwide, and in some cases removed entirely, resulting in growing intra- and inter- professional competition (Gray, 1999). All these trends move control of the firm away from the professions and towards the market. In reviewing the literature of professional firms, and most specifically, accountancy, we find that nearly all academic analysis is conducted with institutional theory as its methodology. At its core is a focus on the various logics that inform actors within institutions. These logics will be a primary focus of this thesis and help to make sense of the changes that occur both at the institutional level and the level of individual actors.

During the 1980s, classical and neoclassical economic theory began to take a hold on most western economies and governments. These theories hold that most exchanges between individuals are driven by purely rational behaviour where individuals in modern societies act solely in their own self-interest, unaffected by social relations. These theories had a significant impact on the western world where neoclassical theory informed a good deal of reform in western democracies. Concepts of corporatisation and privatisation became commonplace. The role of the market was paramount. This was certainly the experience in New Zealand with our own version of neo-classical economic reform that was colloquially referred to as “Rogernomics” after Roger Douglas, the Finance Minister in the fourth Labour government.

Critics took issue with the way that neo-classical economic theory place too much emphasis on the individual. The seminal work on institutional theory by Friedland and Alford (1991) described these economic models as theories that ‘retreat(s) from society’. They argued that theories such as public choice theory, agency theory, rational-actor models and neo-institutional economics did not account for the way in which individuals are exposed to key institutions in society. They argued that by emphasising market mechanisms, whilst ignoring institutional sectors such as families, professions, states and religions, these theories fail. To summarise, no individual participates in an economy in isolation of institutional sectors. These sectors have a profound influence on the individual and often dictate how the individual makes sense of change.

In exploring the future of accountants in practice, institutional theory will be used to analyse and discuss both the current and future states of the profession.

2.2 Institutional Theory

The genesis of this institutional theory was in the 1970s. Prevailing perspectives held that organisations were “agentic actors responding to situational circumstances” (Greenwood, Oliver, Lawrence, & Meyer, 2017). Senior managers were responsible for steering organisations by interpreting the context and taking appropriate actions. The assumption here was that organisations were largely hierarchical.

It wasn’t until later in the decade that scholars began to examine institutional structures. J. Meyer and Rowan (1977) were interested in how formal bureaucracies occurred. They saw bureaucracies arising from the “complexity of networks of social organization and exchange” and the “institutional context”.

The quest to define an institution took some time. Early scholarship focused on characteristics of institutions. Scott (1987) stressed that institutions are, “multi-faceted, durable, social structures, made up of symbolic elements, social activities, and material resources”. Individual participation in the multitude of social relations should not just be examined through the lens of “material interests that the operation of the institution serves, but in terms of the symbolic meaningfulness of that participation”. Later, both Scott and Meyer went further to argue that complex networks of interactions could increase the occurrence of rationalised “myths” (J. W. Meyer & Scott, 1992). These myths would, over time, become codified by law and regulation in order to rationalise them. These rationalised myths then become diffused through a network of individuals.

What was so compelling about this and other related research was the idea that organisations are influenced by the context in which they operate. In other words, organisations exist by widespread social understanding of what it means to be rational, as informed by the rationalised myth

(Greenwood et al., 2017). These rationalised myths are prescriptions of how to behave appropriately within the environment, and organisations then conform to them. A defining characteristic of an institution become the absence of any overt enforcement. The institution is held together by social norms rather than any overarching rules or regulation.

It was wasn't until the 1990s that Friedland and Alford (1991) proposed five institutional orders that could be defined as institutions. They argued that the capitalist market, democracy, (the) nuclear family, Christian religion and the bureaucratic state are "key institutional sectors, with their own distinct logic". Society therefore becomes inter-institutional and observations can be made between the logics of the varied institutional orders. This theory was enhanced by Thornton, Ocasio, and Lounsbury (2012) when they added community and professions, of which accountancy is one, to the list of institutional orders. These seven institutions stand out as they provide a range of cultural symbols and practices that govern a commonly recognisable area of life (Pache & Santos, 2013).

More recently, Greenwood et al. (2017) have attempted to define an institutional order as a "more-or-less taken-for-granted repetitive social behaviour that is underpinned by normative systems and cogitative understandings that give meaning to social exchange…".

These institutional orders impact accountants in practice as they would any other professional. All professions and occupations are constrained to some degree by certain logics that govern the way they behave.

2.3 Institutional Logics

These institutional orders underpin the field of institutional logics, a core concept both within sociological and organisational studies. Institutions within society are guided by very distinctive institutional logics defined as "the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality" (Thornton & Ocasio, 1999). Logics exist in a dynamic environment where the individual and the institution interact. Individuals have roles to play within institutions, and in order to do that, they need to construct viable identities (Berger & Luckmann, 1967). These identities are defined by the logics of the orders that they operate under. The term 'orders' as a plural is critical as no individual operates under just one institutional order.

The institutional orders themselves are quite rigid but not entirely resistant to change. Individuals are able to exert influence and change the orders themselves. DiMaggio and Powell (1983) argued that some actors in an institutional environment envision new institutions in order to advance interests that they hold dear, but which are "suppressed by extant logics". These actors are then the innovators who imagine an institutional environment unrestrained by the dominant logics that currently dominate their world.

Greenwood and Suddaby (2006) saw this observation as important because it shows that institutional entrepreneurs are "interest driven, aware and calculative". Di Maggio's observations were quite revolutionary at the time as they ran against the grain of institutional theory which sought to characterise actors as deeply imbedded in their culture, unaware of alternative models and resistant to change. Imbedded actors are often hamstrung with notions that 'this is the way things are done around here', or that 'this is the way we have always done it'. They lack the ability to innovate because they are committed to normative processes.

On the other hand, institutional entrepreneurs are capable of imagining a new way to do things, unrestrained by the way things have always been done. These actors are at the margins of the field. Greenwood and Suddaby (2006) describe these firms as "less embedded, less privileged, and more exposed to institutional contradictions". They are the antithesis of an imbedded actor who is more likely to be disinclined to change and neither open to, nor aware of, alternatives.

Thornton et al. (2012) went on to distinguish logics from institutional orders. For these authors, the organisational structure could not be adequately explained by the organisational field dynamics portrayed by Friedland and Alford. There was something else at play which they came to call institutional logics, a theory which provides a theory with which to analyse "interrelationships between institutions, individuals and organisations in social systems".

Logics become a frame of reference for individual actors and institutional entrepreneurs may become agents of organisational change. Logics inform the actor's choices for "sensemaking, the vocabulary they use to motivate action, and their sense of self and identity". Sensemaking in this context refers to the way an actor cannot know what may happen in the future until it occurs, but goes back over the episode to understand what happened, "a sequence that involves retrospective sensemaking" (Weick, 1988).

Hence logics become something more than a cognitive frame of reference and becomes action oriented (Glynn, 2013). Logics are closely tied to practices, with logics manifesting themselves in practices. By decoupling logics from institutional orders, researchers can identify logics active within different institutions and determine and analyse which are in congruence or conflict. Logics can also be associated with specific institutions. Put another way, logics are pieces of culture (values, assumptions and beliefs) that contribute to the make-up of individual actors and shape their actions.

As time goes on, they become taken for granted and gain a degree of rigidity and are seen to be apart from their human creators. As a result, they constrain behaviour (Bevort & Suddaby, 2015).

2.4 Institutional Logics in Accountancy

Institutional logic provides a useful framework to examine change in the SME professional accounting sector. The profession has traditionally been characterised as stayed and conformist, and this was particularly true of the Victorian age when legitimisation of financial records was a necessary antidote to unrestrained, and at time, unscrupulous capitalism of the age. The origins of the profession in the wake of numerous scandals in the mid-nineteenth century, aligned with legislative changes that introduced limited liability and managerial responsibility for the probity of financial records. Edwin Waterhouse, a committed Quaker, was one of the founding partners of the firm that lives on today as PricewaterhouseCoopers. He represents perhaps the first instance of an institutional entrepreneur in the profession, drawing on the logics of both religion and the professions to produce a hybrid logic which he utilised in promulgating a set of rules to increase the legitimacy of audit (Jones, 1995).

2.4.1 Fiduciary & Corporate Logics

Thornton, Jones, and Kury (2005) highlighted two dominant logics in the accountancy profession; fiduciary logic, "designed to protect the public interest from market opportunism" and corporate logic, where profit maximisation is the main goal. The article sets out ideal types of institutional logic which exemplify the characteristics expected of each logic.

The authors contrast fiduciary logic, characterised by accountancy as a profession, with corporate logic, which sees accountancy as an industry. Fiduciary logic seeks legitimacy from the reputation of the accountants as they act in the public interest. This legitimacy is enhanced through standardisation and conservatism. Corporate logic on the other hand has a strong focus on the scope and scale of the firm. In the case of the big 4 firms, big is good.

The mission of the two logics varies considerably. Fiduciary logic focuses on building the reputation of the individual firm and building the legitimacy of the firms that they serve. Corporate logic gains status through growth and increasing the size of the practice. We can observe a contrast between selling legitimacy on one hand to selling services and generating profits on the other. Of the latter, corporate logic had to deal early on with the problem of slack resources.

The nature of the accountancy practice is that a good deal of compliance work must be performed to government mandated deadlines. This gives rise to a peak season, and conversely, a time when human resources are underutilised. The corporatists sought to fill this under-capacity with new services not traditionally aligned with the profession. This gave birth to consulting, or in the modern parlance, business advisory. The authors argue that compliance services, and most particularly audit, were seen as a fiduciary responsibility. This has morphed into compliance becoming the conduit for finding advisory services as a modern day trojan horse. Zeff (2003) points to the inclusion of non-professionals in the big 4 firms and the rise of consultancy as a key part of undermining the professionalism of these firms.

At a personal level, the two logics have a very different ethos. One focuses on building the legitimacy of the profession, with the other clearly focused on building wealth for the partners and enhancing their individual careers. Kury, Thornton, and Jones (2005) maintained that the historic transition from fiduciary to corporate logic has seen both fail in the light of market and corporate scandals.

Institutional logic reflects the socially constructed basis of "historical patterns of material practices, assumptions, values and beliefs, and rules by which individuals produce and reproduce their time and space, and provide meaning to their social reality (Thornton & Ocasio, 1999)". As a result, logics shape and determine how organisations and individuals behave. This in turn impacts organisational processes and structures.

The article by Thornton et al. (2005) chose to contrast fiduciary logic and corporate logic when analysing the accountancy profession. The authors set out a table in the article detailing characteristics of the various logics they identify in the article. Professional logic is characterised as grounded in an economic system of personal capitalism contrasted by the corporate logic of managerial capitalism. Theoretic underpinnings of the two logics is characterised by neo-institutionalism for the professions, and managerial theory for the corporates. Professional logic relies on a relational network whilst corporate logic is imbued with a hierarchy. Governance, or a source of authority as the authors term it, is the professional association contrasted against a Board of Directors. Strategy for the professions centres around increasing personal reputation and the quality of the craft. For the corporation, strategy is about increasing their size and diversification of the firm. Where the professional logic tends towards private ownership, corporations are publicly owned. It is little wonder, therefore, that there are considerable tensions between the two logics.

Much of the applicability of the choice of corporate logic in the article stems from the sheer size of the Big 4 firms. They are large, internationally based organisations employing many thousands of staff. Management takes the form of the corporatist model with a hierarchy determining policy and direction. Whilst those characteristics work for large accountancy firms, they don't apply to small to medium firms, particularly in the New Zealand context. Most New Zealand SME firms have one or two directors, and no formal Board. The size of the firm is small, and capital constraints will almost certainly constrain growth. SME firms are privately owned. The Big 4 firms are dealing with multinational clients in a supranational area. Small firms are not. They exist to support their local communities and by in large deal with local clients. The influence of the national professional organisations on smaller firms is much stronger as well (Ramirez, 2009). In short, corporate logic simply doesn't fit well, and nor do the other logics codified by characteristics in the article by Thornton et al. (2005).

The other observation that is important is that there are a number of studies that contend that professional services firms have experienced profound change over the last two to three decades. Perhaps of most interest to this study is the trend of professional services firms away from the social norms of professionalism towards the pursuit of purely economic activity (Brint, 1994).

Fiduciary logic holds that the accounting profession has similarities to educators, lawyers, priests and physicians in that there is a duty to the broader community. Logics of the professions mandate that the accountant is focused on verifying the legitimacy of their client's financial statements (Thornton et al., 2005). The authority of the profession is enhanced through professional organisations and government regulation. Both contribute to the standardisation of financial reports and processes. Governance of the firm and adherence to professional values is controlled by limiting entry solely to members of the professional organisation (Zeff, 2003).

The antithesis of this approach comes from corporate logic. This became prevalent in the 1980s and 1990s where firms, particularly the big 5 as they were then, focused on selling services and building profits. A strategic imperative was to move away from a "peak season" where there was significant pressure to produce work to meet statutory deadlines towards an even flow of work year-round. This necessitated the development of new services. As early as the 1950s, the American Institute of CPAs was touting the "third dimension of accounting" in the form of advisory services, away from the traditional areas of audit and preparation of financial statements.

Personal capitalism and a strong sense of professionalism gave way to managerial capitalism. As a result, the big 4 firms today resemble large corporates in structure whilst tightly controlled by members of the professional bodies. Several authors have pointed to the rise of corporatism and the subservience of fiduciary logic as the reason why regulators have sought to reassert power over the profession. This was aided in large part by scandal, the most celebrated being the collapse of the Enron Corporation in the United States and the failure of Arthur Andersen. This caused the federal government to create an independent board to govern audit procedures. A similar thing occurred in New Zealand with the creation of the External Reporting Board.

Modern day government regulators seem to hold a healthy scepticism over the profession's ability to self-regulate. The irony is that the profession seems to have subjugated its first principals, rooted in fiduciary logic. There has been a marked move from one logic to another. This in turn failed to protect the public investor from unscrupulous activities by firms in the marketplace. This void was filled by government intervention (Thornton et al., 2005).

Accepting that much of the research in the area focuses on the Big 4 firms, there are still many characteristics of corporate logics that apply at the level of the small to medium sized practice, the focus of this study, particularly with the growing need to 'sell' services that do not conform to traditional compliance activity.

2.4.2 Does One Logic Always Dominate?

The concept that one logic will dominate another has been the subject of intense academic debate. This discourse has evolved over time. Initial literature tended to favour one logic overpowering another, dominating the behaviour of the actors (Greenwood, Díaz, Li, & Lorente, 2010). Academics initially focused their analysis on how a dominant logic is usurped by a secondary logic (Thornton & Ocasio, 1999). However, not all academic work adhered to this format. Other studies pointed to how multiple logics can coexist but that period of time, one logic would dominate the others (Hoffman, 1999). The significant difference between these two approaches is introduction of the concept of a time horizon. In other words, for a period of time the logics exist in an uneasy truce amongst each other (Reay & Hinings, 2005). This strand of research suggests that emergency of a new dominant logic represents some sort of truce or resolution between competing logics (Suddaby & Greenwood, 2005).

A third response is to observe that multiple logics do not resolve at all, due to disparate actors, geographical communities or organisational type. Reay and Hinings (2009) show in their article on the medical profession that managers and physicians were guided by different intuitional logics over a long period of time. Greenwood et al. (2010) proffer that logics have subtle differences in geographically distinct regions. This means that organisational differences exist between regions of the same country. Thornton et al. (2005) indicated how competing logics are viewed differently by various segments within the same industry. This observation is important in that individual logics are not homogeneous.

Goodrick and Reay (2011) contend that none of these approaches are particularly useful when examining the changing nature of the professions. They argue that different logics may impact actors in varied ways. The actors themselves are influenced by geography or the nature of their organisation. Moreover, the nature of an actor's work may mean that they adhere to different versions of the same logic even within the same geographical area or organisational structure. They called this "segmenting", where multiple logics can coexist by segmenting their impact on different actors, geographical communities or types of organisations. By extension, they argue that professional work may be segmented by different logics. It is important to acknowledge that firms, regardless of their size or dominance, are rarely subject to a single dominant logic (Lander, Koene, & Linssen, 2013). Firms regularly have to balance competing logics which impact institutional stability and change. Lounsbury (2008) contended that "multiple logics, and thus multiple forms of institutionally-based rationality …can provide new insight into practice variation".

Most literature holds that logics are holistic, but Thornton and Ocasio (2008) suggest that logics contain decomposable parts that may be reassembled in different ways. Goodrick and Reay (2011) argue that this may mean that the work of professionals may resemble different components from competing logics. They term this phenomenon as a 'constellation' of logics, drawing on the celestial analogy the proximity of stars to one another. This concept, in the view of the authors, overcomes the deficiency of prior research which did not adequately focus on the relationship between multiple logics and their influence collectively on a social actor. They contend that the concept of constellations helps us to understand how multiple logics combine to impact professional work simultaneously. The idea of a constellation captures how these logics combine at a given point in time but are subject to constant change. This concept is important. SME accounting practitioners will be impacted by a number of logics, all of them competing with each other. By applying this concept to the sector, we will be able to see which logics are in play and which may be predominating at present.

2.5 Other Logics – Entrepreneurial & Technological

To recapitulate, Friedland and Alford (1991) stated that the capitalist market, democracy, the nuclear family, Christianity and the bureaucratic state were key institutions. Thornton et al. (2005) revised this list to the market, the professions, the corporation, the state, family and religions. This begs the question as to whether there are any other logics that have been 'discovered' since the early 2000s.

As discussed in the introduction, the logic of the entrepreneur is perhaps closer to the actions of the small to medium firm (Stewart, Castrogiovanni, & Hudson, 2016b) than that of a corporate. Entrepreneurial logic is significantly different to corporate, market or professional logics. Where established actors may use a "root approach" to evaluate all possible decisions based on predetermined value judgements, entrepreneurs tend to use a "branch approach" to select the best alternative from a number of related possibilities (Lindblom, 2010). It is seldom possible to evaluate every possible alternative in a complex system. It is even less likely that an actor will be able to determine and analyse each alternative that the "root approach" demands. Rather than use causal reasoning, where the actor starts with a predetermined goal and a given set of means, the entrepreneur uses effectual reasoning (Sarasvathy, 2007). This is where the entrepreneur starts with a given set of means and allows the goals to emerge over time. Put another way, entrepreneurial actors determine what means are available and then identify an end which is achievable by using those means. Both Sarasvathy and Lindblom argue that the logic is not bounded by predictability and the process is necessarily iterative rather than rational.

Entrepreneurial logic is a significant sub-theme in institutional theory (Lawrence & Suddaby, 2006). It is neither managerial nor strategic. Strategy cannot be formulated in advance. Rather, the entrepreneurial actor engages in a trial and error approach as new information becomes available. Mintzberg (1978) described such an iterative process in which changing circumstances force the hand of management to adopt an alternative plan. Whilst the existing plan is “decaying”, “emergent strategies are developing peripherally”. The more information that is generated through experimentation, the more rapid and enduring the result. This is not dissimilar to the rise of agile methodology as a way of all companies become more innovative but without risking large amounts of capital. Perhaps we can see the attempts of actors in established companies borrowing innovative techniques from the entrepreneur.

Institutional theory also extends to the realm of information technology albeit in a formative way. The dominant view held by information systems scholars is that institutions are situated in the environment and they themselves dictate the development and use of IT (Currie, 2011). There is an important caveat here. Researchers seldom discuss the “theoretical and empirical antecedents of institutional theory which resides in reference disciplines including sociology, economics, political science, and anthropology”. There are some studies of note. Currie (2004) herself noted that some innovations perpetuated by powerful institution interests like technology firms and IT consultants were unsuccessful.

This study builds on ideas where rhetoric and reality in large-scale innovation and change programmes can be conceptualized as management fashions. Innovations that have been widely diffused in society become institutionalised. Those that are distrusted or may pose a disruptive threat do not achieve traction. This is borne out in later research by Wang and Swanson (2007) on attempts to introduce professional service automation by institutional entrepreneurs. They found that it was essential to develop a “relative coherent organisation vision for the innovation and mobilise a driver community to create and maintain the industrial infrastructure for the innovation”.

2.6 Sensemaking

More recent scholarship has been critical of the tendency for neo-institutional analysis to focus on macro-level changes (such as technological changes) at an institutional level to the detriment of observing the powerful impact these changes have at the level of individual professionals (Bevort & Suddaby, 2015). The authors contend that neo-institutional theory has an implicit cognitive component that operates at the level of the individual but that this has been largely unarticulated in the literature of previous decades. Indeed, earlier scholarship may well have given the reader the impression that individual actors were impotent to enact any change and that they were, to all intents and purposes, submissive.

Bevort and Suddaby (2015) contend that this is not an accurate representation, that in fact individual actors have considerable ability to influence institutional changes. To illustrate this, they take up the concept of sensemaking (Weick, 1988), the process where individuals make sense of competing institutional logics. Sensemaking can be thought of as a process that turns circumstances into a situation that can be comprehended explicitly in words and can then become a springboard for action It occurs when the current state of the world is perceived to be different from the expected state of the world or when there is no clear way to engage with the world (Weick, Sutcliffe, & Obstfeld, 2005). This process is, therefore, iterative and highly subjective. The central theme in sensemaking is often that people overtly organise to make sense of equivocal inputs.

Whereas much of the institutional theory literature focuses on change at an institutional level, sensemaking helps us focuses on individual agency and how individuals make sense of the unpredictable and unknowable. “Students of sensemaking understand that the order in organizational life comes just as much from the subtle, the small, the relational, the oral, the particular, and the momentary as it does from the conspicuous, the large, the substantive, the written, the general, and the sustained (Weick et al., 2005).

The concept of sensemaking will be important in analysing the impact of technology on public practice accountants particularly in assessing how they are making ‘sense’ of all the change occurring around them and the institutional logics that constraint them.

2.6.1 Scripting

Sensemaking is aided by the concept of identity scripts, the process where individuals creatively engage in “provisional interpretative reproduction” (Barley & Tolbert, 1997). The process of reproduction sees individuals experiment with probable scripts of identity that help them make sense of competing logics. They go on to define scripts as “observable, recurrent activities, and patterns of interaction characteristic of a particular setting”. These sequence of scripts, when viewed as a whole, are then seen as sensemaking.

Individuals have to negotiate and make sense of changes that are imposed upon them by actors at an institutional level (Hallett, 2010). Hallett observed that rationalised myths produce tension when they are recoupled with existing practices. He describes the experience as “epistemic distress” where individuals are engaged in an intense cognitive struggle to make sense of change. It is an epistemological identity crisis for the individuals involved. This concept was expanded by Lok (2010) uses this identity theory to demonstrate how finance sector workers incorporate new and partly conflicting logics into their identities. Individual professionals engage in “identity work”, reconstructing assumptions in order to make changes to institutional logic. McPherson and Sauder (2013) observed a very high level of individual agency in how professionals enact logics in their day-to-day work. Critically, their survey shows that individuals are in no way constrained by the logics of the professions. Instead, individuals creatively iterate, or “hijack” between oppositional logics, perhaps adopting the best of both worlds. They do this either to promote their individual or organisational interests.

Where does that leave logics? After all, institutional theory typically relegated logics to the macro level of institutional structures. Bevort and Suddaby (2015) argue that far from being mere pawns, individuals do not simply implement institutional change as passive actors. They argue that individuals in fact have a “high degree of agency and freedom to reinterpret and can even change institutional logics”.

In this thesis, we will use the concept of scripts to analyse data collected from practitioners. A key part of making up a script is the concept of ‘moments’ which we now turn to.

2.6.2 Moments

As we have seen, institutional logics are often portrayed as contradictory or conflicting. From a micro-perspective, what Barley (2008) refers to as ‘coalface institutionalism’, they must be reconciled and interpreted very often on a daily basis. This can be thought of as a four-stage process where the macro-level logics from the institutional level are interpreted and enacted at a lower, or micro, level. Each of these four stages can be called a “moment” (Barley & Tolbert, 1997). These moments occur and change over time in a continuous process.

The first moment is where logics become “encoded” by individuals with institutional principals. For instance, new entrants into a profession are socialised into adopting assumptions about organisational reality through professional norms of conduct (Covaleski, Dirsmith, Heian, & Samuel, 1998). In other words, they learn ‘how things are done around here’. Logics thus become embedded, either through design or technology.

In the second moment, individual actors “enact” these scripts. This is done by making them routine or habitual. Bevort and Suddaby (2015) observe that in accountancy, the client interview, where an accountant meets with their client to discuss their affairs, is an example of this enaction. They contend that this sort of activity is characterised by being a semi-conscious application of a script in the professional workplace. Barley and Tolbert (1997) note that this frequently occurs outside the consciousness of the actors who “simply behave according to the way things are”.

The third moment focuses on the choice either to revise or replicate an institutional logic. The most likely outcome is replication and this tendency underpins the persistence of institutions over time. Barley and Tolbert (1997) suggest that “contextual change is usually necessary before actors can assemble the resources and rationales that are necessary for collectively questioning scripted patterns of behaviour”. Critically, revision is strongly correlated with external change and may come in a time of epistemic distress.

An obvious example in accountancy is a technological shift. An example in the New Zealand context would most certainly be the introduction of cloud-based accounting software. Xero’s entry into the New Zealand market in 2006 was quite revolutionary at the time. This software removed a great deal of the drudgery of entering data into software systems. Instead, data feeds from the client’s bank were sent to Xero automatically and daily, allowing the process of coding to be transacted either by the accountant or the client themselves. Although the data was not processed using artificial intelligence, the platform was put in place to work towards this incrementally over the proceeding years. The client has always owned the data but for the first time they had access to information produced by the software in real time. They are no longer dependent on the accountant to produce accounting information. The accountant, as the actor, has been made aware that the interaction, in this case with accounting data, is no longer a routine or habitual application of the same old script. Xero has begun to introduce machine learning to its platform which initially will focus on automating data entry. Whilst this may have a more direct impact on bookkeepers, there is little doubt that subsequent innovation using artificial intelligence force accountants to again revise their scripts as traditional work is automated.

This moment, where actors are revising scripts, necessarily involves experimentation (Lord & Smith, 1983), or what Greenwood and Hinings (1993) describe as a “state of flux”. Actors are moving from a familiar, institutional context to one where there is considerable dissonance. Actors confronting an unfamiliar task or situation may draw upon “salient action components from other scripts” (Wofford, 1994). It would be anticipated that we could observe increased conscious information processing, since some tasks will be familiar and some unfamiliar and inconsistent with prior experience (G. Johnson, Smith, & Codling, 2000).

The final moment in the process is where the revised script becomes “objectified”, “externalised” or fully institutionalised by ongoing repetition. This enactment (Weick, 1988) is highly dependent on replication. Scripts become coaligned with institutional rules and routines that persist through their recurrent enactment by organisational actors. The scripts of some individuals provide the context for the scripts of others and we would expect to see the results of the research contribute to new scripts for the profession. A rule, then, is constituted institutionally at the micro level when one actor's scripted behaviour is responded to unquestioningly by a recipient's scripted behaviour. They are both, enacting new rules of the institution so that these rules become normative (G. Johnson et al., 2000). In the development and testing of new scripts through experimentation, the extent to which a script becomes adopted will be dependent on the feedback on such "tests" (Lord & Kernan, 1987).

Barley and Tolbert (1997), therefore, have created a robust framework that shows how actors may react subjectively to competing logics. This thesis will utilise this approach to determine how competing logics are tested with the inexorable rise of technology in accountancy. In particular, we will be concerned with finding evidence of script revision as accountants seek to remain relevant in the changing environment.

2.7 Jolts

Thus far, we have largely focused on change to institutional theory from within an organisation. No discussion on the topic would be complete without discussing events that impact institutions from without. Various authors have written on this phenomenon. Mayer (1982) fashioned the word ‘jolts’ to describe how exogenous events impact a firm and cause change. Jolts often take the form of technological disruption, legislative and regulatory change, social upheaval and competitive discontinuities. Jolts can also lead to the entry of new actors into a professional field. The effect of them is to ‘disturb field-level consensus by raising awareness of extant and alternative logics, enabling the possibility of change’ (Greenwood & Suddaby, 2006). In some instances, these jolts may very well give rise to the necessity of change where the firm has very little option but to adapt.

Sine and David (2003) found that environmental jolts mobilise actors to reformulate institutions, resulting in increased entrepreneurial activity. In the absence of these jolts, the incumbent forms of organisation and the logics embedded within provide an almost insurmountable obstacle to change. Jolts cause current institutional logics to be evaluated and questioned. Environments characterised by abundance and regulation result in a high level of homogeneity in organisational form. Where scarcity and crisis are present, actors are inclined to question normative institutional arrangements and erode their symbolic value. In this environment, the opportunity for entrepreneurial action is significantly heightened.

Greenwood, Hinings, and Suddaby (2002) specifically focused on applying institutional logics to the accountancy profession. They devised a six-stage model of institutional change which commenced with social, technological, or regulatory jolts which precipitate deinstitutionalisation, possibly leading to the next stage of reinstitutionalisation. The authors suggested that in order for new practices to gain currency and be widely known, they must first be "theorised" which they defined as the "development and specification of abstract categories and the elaboration of chains of cause and effect". They found that professional (institutional) associations played a pivotal role in theorisation; firstly, by endorsing organic innovation they lent credibility and, secondly, they shaped the diffusion of ideas.

An example of the role of professional institutions in theorisation and diffusion was the meeting of the recent World Congress of Accountants held in Sydney in November 2018. Much of the programme was devoted to the future of the profession, with a significant focus on artificial intelligence. One of the keynote speakers, Dr Ayesha Khanna, warned that the basics of accountancy would be hugely disrupted as the profession has so much routine, standard and repetitive work (Courtney, 2018). She contends that a "smart accountancy firm…will think of AI as a facilitator and a colleague, not as a master". In this regard, her comments are redolent of the theory of Brynjolfsson and McAfee (2014). This thesis will explore whether a jolt may yet occur in SME practice and explore how practitioners may respond to that jolt. To date there is no evidence to suggest a seismic change akin to a jolt has occurred.

2.8 Network Location Theory

Most of the research in institutional logics in the accountancy profession has centred around the Big 4 firms. Network location theory is useful in examining motivations for change and may well be germane to understanding change in small to medium accounting practices at a micro level. The theory divides actors within a profession into those that are at the centre and those that are on the periphery. The theorists argue that those who work on the periphery are less likely to be as engaged with institutionalised practices for three key reasons.

The first is perhaps intuitive by virtue of their position. Westphal, Gulati, and Shortell (1997) point to research that shows that early adopters, or innovators, are free from isomorphic pressures. They are much less inclined to acquiesce to institutional demands. These actors see things through a new paradigm: one that could almost be characterised as, "if it ain't broke, break it."

Secondly, those actors on the periphery often lack knowledge of institutional expectations simply because they have a very weak connection with field-level or institutional processes (Greenwood & Suddaby, 2006) . They are not immersed and held captive by current logics.

Finally, the peripheral actors experience disadvantages from normative processes and arrangements and because of that, they are motivated to try and disrupt the profession. Simply, they stand to gain considerably from any change, often because they have a relative competitive disadvantage with their product and service mix (D'Aunno, Succi, & Alexander, 2000). This scholarship might explain why actors who have low embeddedness may seek change, particularly when motivated by interest dissatisfaction.

The authors do concede that some embedded firms can act as institutional entrepreneurs but that these situations are atypical. They also contend that institutional entrepreneurship is not always exemplified by the actions of an individual firm. They contend that there is significant evidence of mimicry with firms following the leader. Mimicry is considered a form of isomorphism (Westney, 2005), a central construct of institutional theory which holds that organisational designs tend towards homogeneity over time. Therefore, there is a considerable likelihood that the elites will have shared ownership in commencing institutional entrepreneurship. Perhaps this is in part due to there being safety in numbers.

2.9 Criticism of Institutional Theory

Institutional theory is not without criticism. Powell (1991) holds that it suffers from too much socialisation and that the theory tends to suggest that organisations are overly passive operating in environments that are highly constraining. Moreover, he holds that institutional forces are not always the main source of change, with early adoption often being driven by technological considerations. Granovetter (1985) agrees, arguing that the rise of institutional theory gives an over-socialised perspective.

2.9.1 Constrained Efficiency Theory

Institutional theory grew out of frustration with the neoclassical economic approach of the 1980s. It was to a degree reactionary, seeking another path away from the seemingly unassailable dominance of the market in economic and political theory of the time. However, Roberts and Greenwood (1997) argue that transaction cost theory is still a vitally important foundation for understanding organisational design and should not be discounted. Transaction cost theory, and its incumbent reliance on market mechanisms, is clearly a key component of neoclassical economics.

In isolation they agree that transaction cost theory leaves critical issues unaddressed, yet they assert that both theories, institutional and transaction cost, are not mutually exclusive. They believe that they are complementary elements of what they called a constrained efficiency network. This differs from an efficiency optimising approach, favoured by the neo-classical economists, in that the network is focused on efficiency seeking whilst acknowledging cognitive and institutional constraints. In contrast, the efficiency optimising approach only considers competition. The constrained efficiency network recognises that organisations are constrained not solely by competitive pressures, but also by institutional constraints. To quote John Donne, “no man is an island”. Organisations evolve and are constantly exposed to change. Transactional cost theory has no account of how novel organisation designs emerge. The advent of rapid technologic change is all but ignored and yet it is clearly pivotal to growth.

The constrained efficiency network theory argues that the design choices are governed by the extent to which the competitive and institutional environment dictates a criterion of strict efficiency. For instance, Greenwood and Hinings (1996) cite the example of an accounting practice that is organised as a partnership. The organisational form may not be the most efficient structure for the enterprise but institutional demands from professional bodies or regulators dictate that firms organise in such a way. This example is somewhat historic today with many accountancy firms structured as limited liability companies. Nevertheless, institutional theory shows how the actions of firms are not solely governed by market forces but also by institutional pressures. These institutional pressures may also encompass societal expectations along with the expectations of leading organisations.

Greenwood and Hinings (1993) also point to archetypes, or models, as a useful way to understand change. Archetypes exhibit a number of patterns that are common in a specific industry and comprise a configuration of work patterns. These may play out in systems or structures that have a certain homogeneity.

They argue that convergent change often occurs within the structures of an existing archetype. An example might be instituting a management team that reports to the partnership. Radical change, on the other hand, is exhibited when an organisation moves from one archetype to another. It represents the breaking of the archetypal mould and a new way of doing things. By way of illustration, Greenwood and Hinings (1996) use the example of a professional partnership appointing a non-accountant as a chief executive office who amongst other duties would assess the performance of the partners. This would indicate the possibility of a discordant structure in that it doesn’t fit with the archetype. It might also indicate a possible move towards a new archetype of a corporatist model. Institutional theory therefore emphasises convergence around institutionally prescribed templates, or archetypes.

Importantly, they argue that in fields such as law and accountancy, there are very clear mechanisms to disseminate and hence “normative, coercive and mimetic practices (for conformity) are high”.

2.9.2 Scale and Geography

So, we see that the role of market forces cannot be underestimated and deserve a place alongside institutional theory. Change can also be driven by the scale of the firm or by geographical differences. Divergent organisational change is more likely to occur in fields that have strong, local forces and strong, but heterogeneous, institutional forces (D'Aunno et al., 2000).

Importantly, low demand at a local level coupled with intense competition between local firms will see some firms exit and others maintain their status quo. Those organisations that have key disadvantages in terms of their mix of products and services will need to make significant changes to their templates in order to retain any competitive advantage. The threat of direct competition may push firms away from competitors. Institutional differences, on the other hand, may pull firms closer to similar competitors (Baum & Haveman, 1997). Organisations define their interaction with other firms by asserting domains. For instance, domains might take the form of goods produced or services performed, or even technologies deployed. The more organisations domains overlap one another, the greater the intensity of competition.

The opposite is also true. If domains don't overlap one another, competition is seldom present. Key to this is geographical proximity between competitors. More competitors in a localised area are likely to give rise to more competition between them.

Aligned to this is the size of the organisation. Hannan and Freeman (1993) contend that different sized organisations require different strategies and structures. This means that large and small organisations engaged in precisely the same occupation may have very different resource needs. Patterns of resource use become localised to the particular size of an organisation. As a result of this, similarly sized organisations compete most intensely with each other.

Throughout this chapter, the reader has been exposed to the theory around professions and institutional theory. The latter grew out of dissatisfaction with the neo-institutional analysis of the 1980s and its single focus on the market. Institutional theory was bolstered with the inclusion of institutional logics that inform the behaviour of actors. In order to understand how actors make sense of institutional change, the idea of scripting and moments were added to the literature. These concepts of scripting and moments will be utilised in the analysis of data in order to capture the current state of public practice accountancy in New Zealanders and how practitioners are making sense of the challenges of technological advancement. In particular, the research question relates to how accountants will remain relevant in this changing environment. In the following chapter we examine the methodology that was employed in collating research and analysing the results. The reader will see how the adoption of the scripting technique is deliberate and has been chosen to understand how individuals are making sense of their future state and revising their scripts for tomorrow.

Chapter Three Methodology

In the previous chapter, the academic research on professions was highlighted before moving to the development of institutional theory. Whilst much of the early research on institutional theory focused at the institutional level, more recent scholarship has concerned itself with the way individual actors – accountants in practice - revise their taken for granted 'scripts' to make sense of change. It is that process that we will concern ourselves with and for that purpose it is useful to outline the methodology that was utilised in assembling the data and subsequently analysing it.

In its core sense, methodology refers to a discipline concerned with the study of methods used in carrying out some form of enquiry. Methodologies refer to distinct approaches to studying the social world and the ontological and epistemological assumptions involved (Hammersley, 2011).

The research problem primarily concerns the future of the SME accountancy profession in public practice within New Zealand and practitioner's responses to the rise of technology and the threat that may or may not pose to their future relevance. The advent of artificial intelligence and machine learning is slated as posing a significant threat to the viability of the accountancy profession in general, and more specifically to SME practices. Larger organisations such as the Big Four are likely to have more resilience as they provide a range of highly specialised services such as audit and taxation. However, most SME accountancy practices provide more generalised services with the bulk of their revenue coming from compliance services such as annual financial statements and income tax returns along with ancillary returns for GST and Fringe Benefit Tax. There are exceptions, with some smaller practices still specialising in audit, but these firms are the exception rather than the rule.

3.1 Research Approach

Individuals are trying to make sense of the change that is occurring in the accountancy profession. The research focuses on how these actors are grappling with that change as part of 'sensemaking'. To help us in this work, the analysis uses the process of 'scripting'. Bevort and Suddaby (2015) describe this process as iterative where "individuals creatively engage in provisional interpretative reproduction in which they experiment with probable or potential scripts of identity that reconcile competing institutional pressures". The concept of individual agency is critical here. As we saw earlier in the review of the literature, the idea of micro-level change has been largely overlooked in favour of macro-level changes at the institutional level. This study seeks to explore and identify where individuals are taking steps to change institutional templates.

Theoretical analysis was undertaken using concepts from the institutional theory tradition of work contained with organisational and management theory. As we have seen, institutions operate at different levels of analysis. Research can be conducted at individual, organisational or societal levels, or indeed across all three (Thornton et al., 2005). Based on the work of Bevort and Suddaby (2015), the qualitative analysis looks closely at how individual actors make sense of, and enact, the seemingly irresistible pressure to move from professional to corporate logic. In this regard, a heavy reliance is placed on the work of Friedland and Alford (1991) and Thornton et al. (2005). These seminal articles were critical in defining the field of institutional logics and defining key characteristics of core logics, specifically fiduciary or professional logic and corporate logic. The concept of sensemaking (Weick, 1988) is also critical in showing how actors cogitatively process change and reconstruct logics.

One of the advantages of using the concept of scripting is that it is more redolent of patterns of interaction and the cognition that occurs at an individual level. We can observe how small to medium sized practitioners are trying to make sense of the change that is occurring in their profession and how those changes are likely to impact their work. We are concerned with how individuals are responding to the institutional forces impacting the accounting profession and making sense of change. We know from the literature that scripting is an iterative process. Moreover, we can analysis texts using the concept of scripting which can be broken down into 4 distinct "moments". These moments are defined in order as encoding, enacting, revision or replication and finally objectification or externalisation.

The scope of this thesis is not sufficiently broad to deal with all four. Rather, there is compelling evidence that the profession is at the third stage of revision where the actor is grappling with whether to revise or replicate the institutional logic. We learnt from the literature that this is common at a time of external change. Barley and Tolbert (1997) explicitly cite three situations where an institution can be modified: an exogenous shift in technology where revision is usually adopted, cross cultural contacts and economic downturns. In their absence, Pettigrew (2011) argues that individual actors are likely to be constrained by others who, in lieu of a disturbance in the status quo, are likely to resist previously negotiated arguments. There is scant evidence that the move to cloud computing was demanded by the profession. Rather it was imposed by technological entrepreneurs, just the sort of exogeneous technological change that gives rise to revision.

The data will be analysed by looking at how accountants in practice are revising institutional logics in an attempt to make sense of technological change. From there, we can use inference to attempt to discern emergent scripts.

The qualitative interviews were transcribed, allowing for later analysis by coding the data utilising NVivo software. Coding focused on iterative-inductive thematic analysis (O'Reilly, 2012) by using a line-by-line open coding of semi-structured interview transcripts. This technique generates rich thematic analyses, giving preference to participants' perspectives. In this way, it prioritizes validity, which is an assessment of "whether the results are actually congruent with what the researchers intended to measure or study and whether they are congruent with reality as it is found for participants in the field" (Schensul & LeCompte, 2013). The trustworthiness and merit of analyses generated through open coding can be assessed by using criteria such as credibility, dependability, confirmability, and transferability (Guba, 1981).

3.1.1 Mixed Methods Research

Data was collected using a mixed-methods research methodology, combining both qualitative and quantitative research in the hope that it gives a richer and more comprehensive understanding of the SME public accountancy sector within New Zealand. To rely solely on qualitative research would necessarily limit the quantity and the quality of the data gathered. Using a mixed method approach is intended to "gain greater insights into increasingly complex business and management phenomena and discipline-based inquiry" (Cameron & Molina-Azorin, 2011).

Qualitative interviews were held in advance of the quantitative survey and influenced and shaped the survey questions that followed. This exploratory sequential design is ideal in a situation where we have "hunches", or hypotheses, which can then be tested using qualitative research. It also allows the scope and generalisability of the qualitative findings to be assessed (Bryman & Bell, 2015). This qualitative research was useful in teasing out the major themes and then support them with more empirical evidence. As the research is exploratory, there was a need to add depth to survey results. Thus e*xploratory* designs are sequential where the qualitative strand may be used to build a theory or identify variables that are tested in the quantitative follow-up (Walsh, 2015). As such, the qualitative research dominates.

3.1.2 Grounded Theory

Data analysis is a "rich, messy and complex process"; the chosen research method dictates how the analysis is undertaken (Cavana, Sekaran, & Delahaye, 2001). As the nature of the research is explorative, grounded theory was selected as the method of qualitative analysis for the interviews that were conducted as part of this study. Grounded theory can be conceptualised as a way to generate theory by systematically gathering and analysing data, working back and forth between data and theory (R. Johnson, McGowan, & Turner, 2010). This method is advantageous in that it allows the researcher to use an "inductive but systematic approach to design and data analysis". This method fits particularly well with mixed-method research due to the complexities of the human world (R. Johnson et al., 2010). Theory can maintain this richness as it "seeks to build complexity by including context" (Gray, 2018).

Some of the characteristics of grounded theory that were applied included delaying the use of literature until the analysis is well underway, using memos to help guide in the discovery of categories and relationships and relying on theoretical saturation to identify a point where research can stop (Guetterman, Babchuk, Howell Smith, & Stevens, 2019).

Academic research holds that there are two generations of grounded theorists. The first generation is exemplified by the work of Glaser and Straus, with the second closely aligned with interpretivists of that theory, most notably Charmaz. Whilst the scope of this methodology chapter does not permit a full exploration of the academic literature, the Staussiaum and Glaeserian strands of grounded theory differ in that the former focuses on defined procedures whereas the latter sees emergent theory coming from the analysis (Flick, 2015). The second generation, exemplified by the work of Charmaz (2013), argues that any theory we generate offers merely an interpretation of the world we research in and produce results from. As such, results come from constructed theory rather than theory emerging from the data. This concept of constructivism is closely aligned with my analysis as institutional theory with the concept of scripting and moments was employed from the beginning in analysing the data.

3.2 Qualitative Research

Interviewees were sourced from the membership of CPA Australia, one of three organised professional accountancy groups operating in New Zealand. The choice of CPA Australia was due to me being a member of this professional body and so the management of the organisation was highly accessible. Because of Privacy Act concerns, the Country Head of CPA Australia emailed members in public practice asking them to participate. Those who volunteered were contacted with further details of the research and agreed to participate. Care was taken to avoid any bias. I did not have a personal relationship with any of the participants.

3.2.1 Interviews

Eight semi-structured interviews were conducted either face-to-face or by telephone over a three-month period. Eight interviews were sufficient to reach saturation and allowed for opinions from a wide range of practitioners whilst keeping the analysis manageable for the context of this study. The interviews consisted of 17 questions (a copy of which appears in the appendix). The typical duration of the oral interview was around 50 minutes. Care was taken to ensure a good spread of ethnicity, gender and age. All but two of the interviewees were based in Auckland. This was not intentional but merely reflected the fact that CPA Australia has the majority of its public practice members in the Auckland region.

The choice of interview questions was informed by the NZIER survey referenced in the introduction, and a document outlining the questions is included in the appendices. The interview started with some situational questions asking about the practitioner's experience and how they came to be an accountant in practice. The interviews then moved to explore their current situation and to discovered which services were growing and which were declining. The interviewees were then asked how they thought public accountancy would change in the next decade. This timeline was chosen as it provides a medium-term view. Interviewee's views on technology were canvassed along with whether they were outsourcing any work. Finally, they were asked about their skill set and that of their staff.

All interviews were taped with the approval of the interviewee and written transcripts produced for subsequent analysis.

There were three main themes which emerged from the interviews undertaken and were derived from a grounded theory analytical approach. The first was the impact of technology on the production of work within the practice. The second was the availability of qualified staff both now and into the future. The third was moving from the traditional professional logic of compliance to providing real time business advisory to clients. The following three chapters deal with these themes in detail.

3.3 Quantitative Interviews

Following qualitative interviews, the results were used to inform the development and administration of a new survey instrument and then interpret the two sets of results together so that the quantitative results can verify, confirm, or generalize the initial exploratory qualitative findings (Plano Clark & Ivankova, 2016). A key advantage of the sequential qualitative to quantitative design is that as a result of the chronological sequence of the qualitative and quantitative strands, the study develops in a more predictable manner and makes it easy for one researcher to implement (Tashakkori & Teddlie, 2010).

The goal of the quantitative interviews was to gain a sense of the degree to which views were held about the current and future state of the profession. Answers were structured in such a way as to avoid closed questions and to allow respondents to give verbatim answers where appropriate.

A web-based survey was developed, piloted and then published using Qualtrics software. Email addresses were sourced manually from publicly available information on the websites of CAANZ, CPA Australia and ATAINZ. These were transcribed by the researcher. Quantitative surveys were emailed to 1191 practitioners across New Zealand. Care was taken to include only SME firms and excluded any larger firms such as the Big 4 and nationwide "tier 2" firms with multiple partners. A total of 273 practitioners logged into the website hosting the survey and 203 were completed. This represents a completion rate of 74%.

Whilst the overall response rate was only 17.04%, this should not impact on the external validity of the research as the questionnaire was used to support the dominant qualitative research (Bryman & Bell, 2015).

A copy of the research questions appears in Appendix Two.

3.3.1 Demographics

61.57% of respondents were Chartered Accountants, 27.51% were members of ATAINZ and 3.06% were members of CPA Australia. There were some respondents who were members of more than one professional body which explains why the percentages do not sum to 100.

When asked what their highest level of education, 59.9% of all respondents held a bachelor's degree, with 17.82% holding a post graduate diploma and 7.43% a master's degree.

82.35% of respondents identified as New Zealand European/Pakeha, 3.92% as Asian, 1.96% as Maori and 0.49% as Pasifika.

Age brackets were determined using 9 brackets from the US census. 37.93% of respondents were aged 45-54 years, 27.09% were aged 55-64 years with the 16.26% aged 65 to 74 years of age. Only 13.3% were in the 35-44 age bracket.

Roughly two-thirds were male (65.84%) and one-third female (33.66%).

The questions in the quantitative survey mirrored both those asked in the qualitative interviews as well as testing some of the statements that were made by interviewees, particularly around the idea of corporate and fiduciary logic.

A copy of the quantitative interview is included in the appendix.

3.4 Ethical Considerations

A low risk notification was submitted and approved. Consequently, it was not assessed by one of Massey University's human ethics committee.

In making the application, care was given to consider the *Code of Ethical Conduct for Research, Teaching and Evaluations Involving Human Participants*. As such, participants rights were considered paramount and included in an information sheet, a copy of which appears in Appendix One. The same wording was used for the quantitative survey.

All participants were assured of anonymity of any data collected and confidentiality was assured.

In this chapter the focus has been on the methodology that will be employed in collecting and analysing the research data. The study involves mixed methods of qualitative and quantitative research using an exploratory design within the overarching environment of grounded theory. The way participants were selected was discussed along with the ethics that were considered as part of the study. Having discussed the methodology, we now turn to analysis and discussion of the research. The research question relates to the future of the SME accountancy profession in public practice within New Zealand and practitioners' responses to the rise of technology and the threat that may or may not pose to their future relevance.

Chapter Four Technology

Throughout the introduction we saw the growing impact that technology is likely to have on the production of work in accounting practices. Whereas workflow in practices was a largely manual task in prior decades, computerisation has made an appreciable difference in the workflow of practices since the 1990s. As the influence of technology increases in accounting practices, the amount of time spent on individual jobs continues to reduce. By inference that may mean that accountants will no longer be able to charge as much for the work they have traditionally performed. They will either need to replace this revenue from new sources or face the prospect of existing the profession.

Many practitioners have already moved from a server-based environment to the cloud. Whilst the technology in itself may have fascination for those of a technical bent, the real significance is that financial data, once the preserve of the accountant or bookkeeper, is now readily available to the business owner. With tools like Xero, the business owner can produce basic financial reports in real time without resort to their accountant.

This democratisation of data is a significant change and one where it might be reasonably expected to cause some tension. Clients do not necessarily possess the skills to draw conclusions from the data that is presented to them. The barriers to entry in the profession are being slowly eroded by computerisation and part of the research was interested in gaining a deep understanding of how practitioners were going to cope with this 'new normal'.

In order to test some of these assumptions, research was conducted with accountants in practice. The first broad theme was the area of technology.

4.1. Corporate Logic and the Future

There was considerable evidence in the qualitative interviews that technological change was having a significant impact on productivity, the ease of entry into the profession, especially as an accountant in practice, and the way in which small to medium practitioners are revising their strategy in this new environment. Practitioners are already revising their scripts faced with change around the future of the profession. Most perceive that the change will be significant. Of interest there was not a high degree of resistance to the changing environment in either the qualitative or quantitative data. When asked about threats impacting accountants in practice, only 12.58% of respondents identified AI and software as a threat. A reasonable inference is that most practitioners are at least comfortable with the prospect of AI and may even see it as an advantage in years to come.

There was no sense of resignation or fear but rather a genuine level of excitement in what was to come.

"There needs to be a move to embrace the technology because that is what the clients are doing and work out how to make money a different way. "

Accountant D

"I love (technology)…it helps you to achieve something faster and more efficiently".

Accountant E

"I like how easy (technology) makes business. I like how accessible you can be to your clients. I like the speed at which you can do things. Remember, I'm 62 and used to do a set of accounts on multi-column journal paper. I'd probably still do it that way if I had to do a set of accounts."

Accountant G

These comments were supported by the quantitative survey. A huge majority of 77.94% somewhat or strongly agreed that technology would free up their time to spend more time with clients. There is a caveat here. This represents a script at the current moment, informed by the possibility of more technology and the promise it will bring. This script could very well change once the promise of that technology becomes a reality.

Productivity in the practice is clearly an area where practitioners see a substantial advantage. A relatively new practitioner commented on the how technology had eased her entry into the profession.

"It's amazing how easy it is to start your own practice now. It will be very hard to change back to the old days."

Accountant A

The actor talks here about "changing back" to the way practices were run in past decades with less advanced software and more manual processes. The start-up costs are substantially reduced. No longer does a practitioner need to invest in a computer server. All the technology is available in the cloud. This also has the potential of moving away from the traditional office environment and ushering in flexible working, where practitioners and staff may work from home.

Another participant also signalled the falling cost of technology as a positive development on the capital costs required to establish a practice.

"Entry into the profession will be easier and there will be more accounting businesses. All the professional associations are looking to grow their numbers. Entry to the market will be much easier. You can start a practice pretty much without any outlay."

Accountant E

There was no sense of alarm in these comments. If anything, the falling capital cost of setting up a practice was being welcomed. This was tempered with an awareness that the new environment will be difficult because of the availability of suitable staff and the quality of graduates, something which we address in the next chapter.

Practitioners are engrossed in how the technological change is going to impact their relationships with clients. Most consider that business advisory is going to be a significant part of their practice in the future. They concede that the traditional operations of an accountancy firm are going to be upended and that the way they sell their services and worth to clients will need to change with it.

> *"Number crunching is all going to be automated. Clients are looking for someone to provide them value. You need to provide them with information they can use to grow their business and to make sure the business is going to be profitable. You aren't going to be focused on the rear-view mirror but focused on where they are heading."*
>
> *Accountant C*
>
> *"I think accountants will become virtual CFOs (Chief Financial Officers). They will provide quick, real time advice to the CEO for decision making. This will be a key aspect. They will identify trends, opportunities and losses before they occur. Trends will be from internal and external data."*
>
> *Accountant C*

Interestingly, survey respondents identified revenue from business advisory was contributing only 16.4% of a firm's revenue, on average. Compliance still makes up 66%. Practitioners appear to be in the very early stages of revision, acknowledging that business advisory will likely be a significant contributor in the future but either choosing not to offer this service at present, or more ominously for their future perhaps, struggling with how they might offer these services to their client base with the skills they have. There are exceptions. Some firms have made great strides in moving their practice to focus on advisory but it appears the majority have not. This perhaps indicates that the script is being the moment. Practitioners are welcoming the promise of technology but they have yet to complete the revision of the script and enact the new script in practice.

It is also useful to reflect on this stage of the scripting process. Actors can either choose to revise or replicate an existing logic. Those who specialise in audit certainly seemed to be favouring the latter approach. Audit is a specialist field and heavily regulated. The barriers to entry are substantially higher than for those offering compliance services. Curiously, auditors in the SME space seem to be looking at a future where technology is less likely to have an impact to their revenue streams. One interview respondent had developed his own bespoke software whilst another had invested heavily in an off-the-shelf product. Yet neither identified technology as an impacting business-as-usual. They both saw themselves as being nimble enough in the SME space to grow their practices, perhaps at the expense of larger audit practices who may be more constrained through legacy systems and an institutional logic more resistant to change.

> *"Investment in technology is quite crucial, especially in starting up. I want to have scalable technology. I have a vision of how my practice is going to grow, but it may grow even more than that. So, I'm investing in technologies that can accommodate that… Currently I'm only using about 5% of (the software's capacity). It's an investment.*
>
> *Accountant C*

The auditor maintained that he had selected 'best of breed' technology that has the potential to grow alongside his practice. There was a sense that as a start-up, he was currently doing less complex work but envisaged a future where, with the benefit of software, he could compete in the space currently dominated by the Big 4.

Another practitioner was clearly revising scripts in a much wider sense, wondering how machine learning and AI would see dynamics change between the accountant and client. She pointed to the need for a cultural change amongst accountants in light of the likely change in the power dynamic between client and practitioner.

> *"As far as we can be certain of, there will be more automation. There will need to be more personalised services and (we will) need to build relationships. That will be a very big thing. Clients will be able to get information quite readily. It will be turning that information into an outcome and building confidence with the client. Softer skills will be needed."*

Accountant D

The traditional transactional relationship is based on the need to comply with legislation and regulation; hence the term compliance. There is no doubt that small to medium business owners desire to obey the law and in general regard themselves as law abiding citizens (Ahmed & Braithwaite, 2005). Negative attitudes to taxation and ambivalence about paying tax, combined with the complexity of tax law and uncertainty, lead many owners to seek the services of a public accountant (Blackburn et al., 2010). At least some of the client's motivation for engaging an accountant may be based on the fear of the consequences in running foul of the Inland Revenue Department with the coercive power of the state a key motivator. If technology is going to replace the compliance role of accountants, one of the prime motivators for SME businesses to engage with an accountant will no longer be present. Coupled with the ready availability of tax information on the internet, this signals a real paradigm shift in the balance of power in the relationship. The practitioner is going to apply corporate logic to sell their services in the advisory space. This is very much a core script for the future.

Another concern is that the accountant currently possesses skills which the client doesn't have. If those skills are to be automated by the technology, and that technology complies with the legislation, a significant change, or jolt, can be anticipated. Based on the data and analysis, in the absence of the fear of non-compliance, the relationship between client and accountant will change significantly. Business advisory is a quite different proposition to compliance and requires very different skills. For perhaps the first time the accountant needs to sell themselves to the client. Clients will not simply present themselves at the door with an already established need. Accountants will need to understand the client's affairs in a good deal more detail. They will need to understand the client's personal goals and circumstances. They will need mesh those goals into a strategy. Budgets and cash flows will cascade from the strategy providing a financial roadmap that the client can use to meet their particular goals.

The comments also speak of a change from a transactional relationship, where a client might interact with a practitioner on an annual basis, to a far more intimate one where the accountant is thought of as a key part of the client's team. Different skills are required for this outside the realm of technical competence. Building confidence and trust with a client will be critical. No longer will practitioners begin with financial data and produce compliant financial reports and tax returns. They will need to build trust with the client and understand the client's aspirations in detail. This might even involve thinking more broadly than the confines of the entity principle where an accountant prepares financial information within the confines of the business structure. The client seldom views their business in isolation of their other affairs. Their financial affairs are often intermeshed with the business. For instance, many businesspeople raise capital by mortgaging their homes.

We can see the need for a discernible shift in the way accountants interact with their clients that requires emotional intelligence. This may be a challenge for some practitioners and one which will require acquiring a new range of skills that may not be found in a textbook. Softer skills that may be applicable encompass interpersonal skills, leadership skills, business awareness and problem-solving skills, amongst others (Low, Botes, Rue, & Allen, 2016). These will become essential in earning the trust of the client in the advisory space.

Some practitioners are grappling with how to make money in the changing environment. Whilst the technological change is welcome, some are wrestling with how to monetise some of the services they offer to their clients. This revision is closely aligned with corporate logics, with the need to generate profits and differentiate on client service (Thornton et al., 2005).

> *"I think there is real opportunity to productise the conversation you have with every second person about their business structure… We should be able to offer quite streamlined product around things like that. So, it becomes a common service that you sell as opposed to how we currently give that away in a conversation when we talk about their annual accounts. A lot of our value is not monetised. Let's put some structure around it because who says they won't pay for it, especially if they are coming in to have a conversation about that."*
>
> *Accountant F*

This practitioner is identifying opportunities to monetise services that are currently given away as part of the compliance process. She is revising how the practice might move to bundle those services into a fee engagement with a client and develop new revenue streams, rather than "just giving it away". Yet there was no evidence that she had advanced this any further than the conceptual level. She could see that technology would inevitably erode fee revenue from compliance and was in the early stages of revising how her practice might add more value for clients by offering a service overtly, rather than accidentally.

There seemed to be a discernible difference between younger practitioners who had just entered public practice when compared with those in larger, more established practices. New entrants have the advantage of starting from scratch and imagining the future state of the firm. This seems congruent with the research by Mole (2002) who found that younger firms may be able to make more impact than larger firms, particularly in profitability, as they are able to focus on specific advisor management. Larger firms, whilst possessing stronger skills and expertise by virtue of the size of their teams, can struggle. A partner in a medium sized practice exemplified this when reflecting on the future of public practice.

> *"Overlaying technology across a traditional practice is a challenge, I think. Some firms are taking a very defensive position. There needs to be a move to embrace the technology because that is what the clients are doing and work out how to make money a different way."*
>
> *Accountant D*

For this practitioner, there was a sense the technological change was being imposed exogenously but not by the technology firms themselves. Change within their practice was being demanded by their clients and they were struggling with how to implement this institutionally. She was quite open about their position being one of wait-and-see. They did not see themselves as innovative but prepared to sit and observe from the side-lines for fear of adopting the wrong course. She said that the firm "(has) taken a bit of a pause to see what happens which I don't think is unreasonable. We do try and do new things as they come on if we think they are relevant. We're not into change for change sake. We will try something if we think it will benefit clients." On one hand the practitioner acknowledged that technological change would be irresistible but there was still a noticeable reluctance to lead this change. The firm had invested heavily in outsourcing in order to drive productivity and saw this as a buffer to the challenges that increased automation might bring. There was a sense that this practitioner was more firmly rooted in fiduciary logic and a sense that rather than being in a state of revision, she was being drawn back to replication.

Again, auditors do not seem to harbour the same concerns. There seems to be an appetite to take on more audit work despite the exposure to more regulatory oversight and potential sanction.

> *"The reason I'm focused on auditing is quite simple. The minimum fee I charge for audit is $3,500. It takes about 4 weeks from the start to sign-off. The audit fees from large*

companies can be up to $20,000. If you do compliance, the fee is less. Of course, auditing is good income but risky."

Accountant B

One respondent was clearly focused on revising her corporate logic around services offered to her client base. In preparation for a future where her clients would be increasingly dependent on technology, she was looking to offer technology services, either on a contract basis or as a concierge.

"Technical specialist advice. It is a very complicated area. I would look to organise IT specialists for clients. I'm building up a list of trusted specialists right now. "

Accountant A

4.2 Concerns Centred on Fiduciary Logic

Whilst there is considerable evidence that accountants in practice welcome technological change, there are concerns centred around fiduciary logic. If we think of historic foundations of accountancy, we note that one of the driving forces to professionalise was the need to provide assurance, particularly to investors. Modern day financial reports adhere to a number of statutory and regulatory rules and norms all aimed at giving some level of assurance that records are accurate, consistent and verifiable. With that historic foundation, it would seem too long a bow for accountants to abandon these concerns altogether in favour of an algorithm.

The qualitative survey found evidence to practitioners grappling with moving from being at the centre of the process of concatenating data to being just one of a number of users of data that has already been processed by artificial intelligence or machine learning. This was causing practitioners to go through a process of script revision.

One respondent was particularly strident in her views around automation. Her concern was intrinsically linked to fiduciary logic characterised by her adherence to verification.

"People think that when they have technology that's all they need. They say that "my accounts are all on Xero so it shouldn't be too hard for you to do the accounts". And I'm like, "yeah, it's not hard because that's my (area of) expertise but just because you are on Xero doesn't mean it's right". Technology can undervalue that (accounting) knowledge and the checks and balances (are there) to make sure they are complaint. So that's one thing I don't like".

Accountant E

As with all computerisation, the old adage of 'rubbish in, rubbish out' applies. The practitioner's comments appear grounded in the fiduciary logic. Accountants are hard wired through their training and professional memberships to adhere to a set of practices and routines which conform to particular standards. The move to clients coding their own transactions, rather than accountants, is a clear area of concern. Modern accounting systems make this process appear easy. Clients are free to code data with little or no knowledge of accounting, and more particularly, accounting principles. Clients regularly make errors and so it is incumbent on practitioners to ensure that they check the coded data to make sure that the resultant financial reports are robust.

Whether this view is rooted in resentment or control is a matter for conjecture. Given that accountants are required to uphold certain accounting standards, and apply them with professional judgement, control seems more likely. The other aspect raised in the objection above is that there is an assumption amongst some clients that the final production of accounts and tax returns requires very little effort for the accountant. This is not the case, but accountants, along with other professionals, are facing a growing challenge in proving their worth to clients. This is contributing to the desire to revise scripts to ensure they remain relevant. They need to inform their clients about the accounting process so that they recognise their contribution. This may become more pressing to avoid the client seeing the production of accounts as some sort of nostalgic professional privilege.

However, this fiduciary logic did not find a great deal of favour in the qualitative survey. Respondents were asked whether they felt that practitioners may no longer be able to assure stakeholders that they are materially representing facts accurately with AI and machine learning technology. The question was deliberate phrased to mimic the ethical standards of accountant. Only 36.82% of respondents either somewhat or strongly agreed suggesting that the objections of the practitioner above may be in the minority.

The stated goal of many software vendors is to enable their systems to take over much of the accounting function. This is sold to accountants as a way of freeing their time to pursue more rewarding advisory work, removing the drudgery of double-entry bookkeeping. Whether that is how the practitioner perceives their work is a moot point.

For instance, Xero claims that "machine learning cannot match human insights; rather, it complements brain power. It does the heavy lifting of calculations, the dull stuff of reconciliations and the tedious work of verifying information. While AI does mean computers learning and applying insights, they cannot think like you do and are unlikely to offer the emotional intelligence needed to navigate the complexities of the human world…" (Jackson, 2016).

The practitioner seems powerless to stop this technological intrusion into their traditional world and there is an inherent loss of control. This may well be a form of resentment for some. 62.06% (or two-thirds) of respondents to the survey somewhat or strongly agreed that technology would cause substantial disruption in the profession. When pressed as to whether they viewed that as a threat, only 12.58% agreed. A reasonable inference here is that most practitioners are at least comfortable with the prospect of AI and may even see it as an advantage in years to come.

Another interview respondent was weary about cloud computing from the perspective of confidentiality, a key ethical consideration and deeply embedded in professional logic.

> *"There is a fraud element to consider and I think that there are also privacy issues. There are issues around a security breach. (With) all that information floating around, you have to think that someone has to tempted to have a go at that for their own benefit."*
>
> *Accountant C*

This underscores commonly held concerns around the move from paper files secured in an accountants' premises to the warehousing of digital information on third party servers. Whilst there is no guarantee that an accountancy practice would be immune from a break-in or theft of information from an employee, the concern here is that third-party technology providers have the information of hundreds, if not thousands, of practices stored somewhere in the world.

This concern was held by over a third of survey respondents. Some 35.47% somewhat or strongly agreed that there were concerns about confidentiality of client data. Confidentiality is at the core of professional ethics. All practitioners must make every effort to keep information confidential. It might be reasonable to infer that the majority of accountants have a high level of trust in software providers.

A third respondent also spoke of concerns about the future competence of graduates.

> "If the basic work is done by technology, future accountants won't have knowledge about how accounting works".
>
> *Accountant A*

Her concern might at first glance appear to be one centred around education. Yet it speaks of a growing concern in the profession that in order to dispense quality advice around accounting information, accountants will still require competency in preparing accounts. The tertiary curriculum is still heavily oriented toward teaching students the accounting process. Yet many accountants in practice would hold to the view that graduates, whilst technically sound, lack knowledge around applying the theory of the accounting process to the day-to-day reality of public practice accountancy. Knowledge is built up through repetition and experience. In the absence of this real-world experience, accountants of the future may well struggle to understand financial statements and as a result may falter at offering advisory services.

What is deeply interesting is that these respondents were not modern-day luddites. All three had clearly embraced cloud technology, albeit with one doing so only at the urging of her clients. So we can deduce that these concerns founded on fiduciary logic are not show-stoppers for practitioners. Rather, they speak of the inherent conservatism of fiduciary logic and a nagging concern that technology is moving ahead at the expense of entrenched convention. All three are in the process of revision, of making sense of the change and how that will impact their individual practice. This involves moving from fiduciary to corporate logic and envisaging a future where some if not all of the fiduciary concerns are transferred from the accountant to the software vendor. Far from perceiving AI and machine learning as a threat to their livelihood, accountants in practice see real advantages in the adoption of this technology in the future. Whilst some harbour concerns based on fiduciary logic, there is no perceptible reluctance to embrace technology. In fact, it seems certain that accountants welcome the coming change to their practice. Another interesting observation was that auditors seem may be more strongly wedded to fiduciary logics than their compliance counterparts. It is a reasonable inference that this may be due to the more onerous regulatory and legislative burdens placed on them.

Having analysed and discussed technology, the next major theme that emerged from the research was the staffing challenge. As the demand for traditional compliance skills abate and compliance becomes increasingly commoditised, practitioners are reimagining scripts for the new environment. This is discussed in the next chapter.

Chapter Five – The Staffing Challenge

In the previous chapter we analysed and discussed the views of accountants in practice when faced with rapidly changing technology. The overwhelming majority of SME practitioners seem to relish this opportunity. When focusing on technological change, corporate logic is clearly in ascendancy over any fiduciary considerations and this trend is also evident when attention turned to human resources, as we discuss below. This aligns strongly with the view espoused by Thornton et al. (2005) that efficiencies and growth have fuelled change in the Big 4 firms from a fiduciary to corporate logic. This trend is not limited to the top echelon of the profession. We can see the same sort of institutional revision occurring at the SME level. Thornton et al. (2005) viewed the Big 4 firms rapidly resembling their corporate clients. Fogarty (2014) saw the traditional role of all public accountants, big or small, as serving as a constraint upon the reckless tendencies of capitalism. This concept of oversight, he argued, is deeply embedded in the public interest elements mapped out for the profession and yet it may no longer be part of the culture of public accounting. His view is that that accountants may already be de-professionalising and moving towards "the end of the accounting profession as a construct separate from, and transcendent above, accounting firms".

Throughout the qualitative interviews, another major theme emerged around staffing challenges. It became clear very early on that respondents saw a challenge around staffing for the new advisory environment. This chapter will focus on those staffing challenges.

When quantitative respondents were asked about the most significant threat to profitability in their practices, 22.77% cited the availability of qualified and experienced staff. Concern was not purely centred on the rapidly changing skill set required of new graduates, but on the commercial imperatives of margin and profitability.

Practitioners are clearly undergoing a process of revision, wresting with how to employ staff gainfully in providing advice, and to monetise this advice. Current skill sets are oriented toward the professional logic of compliance and assurance. The corporate logic, exemplified by profits and efficiency, appears to be transcending professional logics in the SME sector, with practitioners already actively outsourcing work to drive down cost, as we shall see.

5.1 Graduates

A number of qualitative interviews highlighted concerns about the skill sets of graduate accountants entering the profession. Participants saw a gap opening between the theoretical knowledge of graduates and the provision of business advice. There was a feeling that new graduates required practical experience in order to dispense worthwhile advice. This view was exemplified by this quote below.

> *"You need practical experience but where are graduates going to start with this? It will be really hard for new grads. It will be too hard. The universities will need to change the way they educate the students. Knowledge about specific industries will be very important. Students (will also) need practical experience. "*
>
> *Accountant A*

This practitioner is clearly revising scripts by questioning the way that students are trained. The traditional path of a graduate entering public practice is to start work on basic tasks such as GST returns or uncomplicated sets of accounts, mentored by a senior accountant. From there, they are exposed to more complexity and learn about the application of tax law. If the predictions of artificial intelligence come to pass, that work will simply no longer be necessary. The experiential learning pathway will cease to exist.

There was an underlying view that the business advisory skills that would be required in the future are acquired from commercial experience and not from tertiary study. One practitioner offered the view that it might be time to think outside the box and recruit junior staff after they have spent some time working in a commercial environment, rather than directed from tertiary study as is often the case now.

> *"It's all about experience. I'm a great advocate of accountants having previous commercial experience. I think it gives them a huge leg up in business. You can teach them tax."*
>
> *Accountant G*

This response, prioritising commercial skills over more traditional professional ones, represents a clear example of revising a professional identity script. The profession has typically split into three main occupational fields, or specialities; financial accountancy, management accounting and audit. In the SME space, financial accountants and auditors are typically employed in public practice and management accountants in either private or public commercial organisations.

There has been minimal cross over between financial and management accountants. Management accountants have developed a distinct identity and regard their careers as independent of financial accounting (Richardson & Jones, 2007). Developing from their origins as cost accountants, management accountants have extended their role to act as internal consultants within organizations focusing on strategic initiatives and performance measurement and management

(Russel, Siegel, & Kulesza, 1999). Management accountants typically concern themselves with financial data and advice for the use of executives within a company. Financial accountants concern themselves with generating financial statements and tax returns for the clients they represent, along with associated compliance. These specialities have traditionally been segmented - The concept of transitioning a management accountant into public practice would be an example of a significant script revision. Public practitioners may begin searching for the skill sets that management accountants bring, particularly micro-analysis of real time data to detect trends within the client's business.

This idea of recruiting different skills sets into the practice was evident in another response highlighted in the previous chapter. Here we saw a practitioner was actively considering recruiting contractors into her practice to assist clients with their information technology skills which is a substantial revision of practice. Fogarty (2014) argues strongly that professional membership is no longer seen as a priority for many large accountancy firms. These firms no longer see professional membership as integral to the worth of employees, or by extension, contractors. The revision process here, even at the SME level, seems to be strongly at odds with traditional fiduciary logic where professional membership underscored the community to which accountants belonged. If the practitioner is right, and clients demand more technological advice, we may see accountants moving further away from the professional status that they have hitherto depended on for validation.

That said, not all accountants see a dim future for graduates. One interview respondent saw the opportunity to use the latent technological skills that millennial graduates possess not only to interrogate data to provide useful information for the client, but to motivate graduates to stay and thrive in the firm. In his view, if practitioners are to fully embrace business advisory, data analytics would be an increasing part of the firm's workload.

> *"In order for a firm to survive, they need to utilise graduates by understanding what they can do with technology. They are very quick and you have to embrace this. You can say "how are you going to be effective in your role by utilising your technical skills?". Then they get engaged. Utilise their brain to analyse the data. They can probably do something in five minutes (that would take) someone (older) three days. Because that is their knowledge. To them its second nature. Ask them to do this. You are giving them a challenge; they get engaged and they do it for you. You need to understand what they know and how it can be used for your business. That's how you keep them longer.*
>
> *Accountant C*

Here the actor is actively revising scripts, moving from the well-established, familiar institutionalised context to a less familiar and, therefore, uncertain corporate context. There is an obvious desire to harness talent by maximising innate skills within new graduates with very little concern for professional logics. Put another way, this is experimentation, a key part of the revisionary process. We would expect increased conscious information processing, since some tasks will be familiar and some unfamiliar and inconsistent with prior experience (Lord & Smith, 1983).

5.2 Outsourcing

Another area where practitioners were revising scripts was the area of outsourcing work to third party contractors. Two of the qualitative respondents were actively embracing outsourcing but for very different reasons. The first had outsourced most of the mundane work of the practice to free up their team to deal with client interaction. This was identified several years ago as a strategic imperative.

> *"(We have) 24 staff in-house and (they are) supported by two outsourced teams in India and the Philippines. The Indian team does most of our compliance and compilation work with the internal team doing most of the client liaison. The internal team services the client throughout the year with any questions or implementing systems. It is their responsibly to initiate a response or to escalate anything they are not confident with. This means tax advice, software, advice on financial accounts and a little bit of management accounting."*
>
> *Accountant C*

Here the firm has made a very deliberate decision in dividing the workload of the practice between those in-house staff who manage the client relationships and foreign accountants who prepare the accounts for subsequent review by the in-house team. Outsourcing is so often seen as a solution driven by the imperative of reducing costs and so it was in this case. However, the decision was also driven by a desire for in-house team members to have more fulfilling work and adding more value to clients. The focus on attending to the needs of the client is interesting. This is very much a corporate logic. We can see that accountants in practice are becoming less preoccupied with producing compliance work. Their attention is now focused externally in providing client facing services. We see the firm adopting outsourcing to increase profitability whilst at the same time freeing up staff to liaise with clients and seek new opportunities.

As anticipated by Greenwood and Hinings (1993), identity scripts are in a state of flux here. Traditionally the firm has been solely responsible for the integrity of all financial statements, produced in-house and reviewed by managers or partners. With accounts production moved offshore, this script is weakening although it is not entirely changed. Review is still a key part of the process.

Another interview respondent worked primarily in the audit space. He is actively using contractors to deal with spikes in his workload but not in a manner of the practitioner above. Rather than seeking talent abroad, he has identified a niche within the audit market in New Zealand.

> *"I only use contractors when I need them. Sometimes I use retired partners from the big four. I pay them $100 an hour and they are happy. I can charge $350 as an example. It's a good margin. The quality is strong. They are seasoned professionals and there's less time for me to go back and correct the work. You can't go wrong with that."*
>
> *Accountant C*

He has identified an opportunity to use highly experienced practitioners. Due to the policies of the Big 4 firms, they are forced to retire from the partnership at the age of 60. These are New Zealand qualified and resident contractors with significant audit knowledge across many large corporate and government clients. What is significant here is the language used by this practitioner. His first observation was of the margin to be made by utilising these contractors. This is language closely aligned with corporate logic and the pursuit of profit. Clearly both the practitioner and the contractors are happy with the arrangement. The retired partners have capacity and they are rewarded with regular work, without any need to interact with the client. The practitioner is reaping the rewards of a low-cost model and the margin is attractive. Of note was the fact that he was using a serviced office environment, affording himself a downtown Auckland address with none of the incumbent overheads of a traditional office. His contractors are based at home, providing their own computers, telecommunications and other office equipment. He is leveraging their knowledge to provide quality services in the audit space. It truly is a mutually beneficial arrangement and one where he is actively maximising profitability by outsourcing everything he possibly can. His role, then, becomes one of coordination of the workflow and liaison with clients. This script revision is significant, eschewing the normative structure of employees towards the flexibility that contractors bring to his operation.

Throughout the qualitative surveys, there was a marked tendency to prioritise corporate logics. In the technology space, we see practitioners actively seeking new scripts to define their identity in the new environment. The move from compliance to business advisory is already identified as a priority and the various actors are implementing this in different ways and at a varying pace. Newer, younger (both in the age of the firm and the partner) start-up firms are ahead of the curve. Established firms are being encouraged to adopt new technology at the behest of clients. There is a sense that this is reactive with existing structures and skill sets acting as an impediment to technological adoption.

In the area of staffing, practitioners are wrestling with the future role of graduates in the absence of the traditional pathway of compliance. The quantitative research highlighted the area of qualified staff as the most prevalent threat to practices. Some practitioners hold the view that the tertiary institutions are not preparing graduates satisfactorily for the future of public accountancy. However, there has always been a prevailing view amongst some practitioners that graduates are not fit for purpose when they enter the workforce. This needs to be balanced somewhat by the reality that tertiary study is in many respects focused on theory. Practical experience can only be attained by experience. As part of the revision process, we saw different approaches, from harnessing the technological bias of new graduates to actively recruiting accountants with some commercial experience and training them on the intricacies of income tax treatments.

From the aspect of fiduciary logic, this may well represent somewhat of a paradigm shift. The traditional silos are breaking down. The specialisations of financial and management accounting are becoming increasingly blurred. This may well mean that accountants in practice will become generalists, acting as a business concierge for their clients. Their future role will may well be to diagnose the problem, give advice where they can and refer more technical issues to specialists, in much the same way as a general practitioner does in the medical profession.

Within the theme of staffing, we can see two main issues. One is whether the graduates of today will be 'fit for purpose' where workflows will move from compliance to advisory. The other is the opportunity to outsource more of the work of the practice, aligned with the broader commercial trend of the 'gig economy', moving from employing staff members to hiring experts for specific tasks and allowing the firm to become more nimble. That then heralds a significant change for the future of public practice accountancy. At this moment, practitioners are clearly sensemaking. either faced with replication or revision, practitioners are choosing the latter.

Chapter Six – The Future of Public Practice Work

To date we have explored the impact of technology on work and the impact that will have on the human resources in SME accounting firms. Technology is likely to play an increasing role in automating the statutory, or “compliance” tasks of accounting practices. Whilst the impact will not be immediate, it will be incremental and significant. Practitioners are clearly choosing to revise scripts rather than replicate normative practices.

Aligned to this change, we see practitioners wrestling with their future staffing needs. There appears to be a widely held view that there is a disconnect between the skill set of graduates and the advisory work they will be expected to perform. This criticism seems to mirror research showing an imbalance between employer and employee expectations and a perception of deficiencies in the tertiary education courses. Moreover, research in other countries has found that graduates, whilst technically adept, lack analytical thinking skills (Courtis & Zaid, 2002). Of real interest, there is a small but growing number of practitioners who are looking for different skill sets in their employees, with either a technological or advisory bias. The fiduciary logic of professional standards seems to be giving way the corporate logic of market requirements. There was little evidence of any sentimental feelings of loss in this change of focus. Quite the contrary, accountants in SME firms seem to be relishing the move to business advisory. Part of this script revision was the use of third-party contractors to outsource work that might have traditionally been performed in the firm.

The third major theme that came through in the research work was around the future of public practice work. This was evident in respondent’s reactions to how they would work in the future. As we shall see, practitioners saw compliance, founded on fiduciary logic, declining in significance. Business advisory work, closely aligned with corporate logic, would have a more significant role in generating revenue. However, we will see that the experimentation underway as part of revising identity scripts is in preparation for a future state, one that has yet to impact practice.

6.1 The Current State: Whither Compliance?

In the introduction we saw (Carey & Tanewski, 2016) usefully define the two predominant strands of public accountancy within the boundaries of statutory and non-statutory work. The former neatly sums up the traditional work of the public practice, preparing annual accounts and tax returns for small to medium business owners, high net worth individuals, trusts and not-for-profit organisations. This is usually referred to anecdotally by practitioners as ‘compliance’. Statutory requirements also encompass auditors and there was evidence from the qualitative survey of some auditors deliberately building audit practices within the highly regulated environment that affords them some safety from competitive pressures facing those practices that do not offer assurance services.

Non-statutory work, therefore, is by its very nature optional. Practitioners need to sell their capability and value to clients. This necessitates the use of very different skills from the typical compliance transaction, where the client goes to an accountant because they need to comply and lack the skill or desire to complete statutory accounts themselves. Non-statutory work neatly fits within the corporate logic and by its very nature, demands that practitioners revise their scripts.

In order to take stock of the current state of public practice, practitioners were asked what proportion of their current workload as statutory work and what was non-statutory. Importantly, compliance still makes up a significant amount of the revenue generated by the SME practitioners.

> *"Compliance is still the biggest part. We do advisory and a little bit of bookkeeping. Compliance would be over 50%."*
>
> *Accountant A*
>
> *"75 per cent would be compliance. Tax returns, annual accounts, GST, FBT, share transfers. All the IRD and Companies Office compliance. I'd also include setting up accounting systems and software in that. We do run of the mill structuring and advice with clients setting up a company."*
>
> *Accountant D*
>
> *"80% of our work is compliance"*
>
> *Accountant F*

The qualitative data correlated closely with the response to the quantitative survey. Respondents on average stated that compliance makes up 66% of their turnover with business advisory work a very poor second at 16.4%. Other potential revenue streams were equally poor contributors. Data analytics contributed less than 1% of revenue and software advice and training only 3%. Of the two, data analytics was slated as a potential source of future revenue in the NZIER Report referenced in the introduction and yet it seems that public practitioners have either not identified this as a source of growth or discounted it. It would seem that the current state of public practice is strongly rooted in fiduciary logic.

One firm stood out by already offering a larger percentage of advisory services. Even so, half of their revenue was sourced from compliance.

"I would say bookkeeping & compliance is around 50%. We don't do audit. Business advisory is around 40 per cent."

Accountant G

So, whilst practitioners acknowledge that the future practice will need to derive much more of its income from advisory work, for most practitioners, this revenue stream does not currently contribute a significant part of their income. If technology is to automate compliance, this potentially leaves accountants in practice severely exposed in the event of their major source of revenue disappearing. Perhaps they intend to grow their advisory revenue over time but for most, it represents a pretty low base. Any script revision is in its infancy.

Interestingly, the quantitative data points to compliance revenue growing. 27% of practitioners surveyed stated that compliance was a growth area compared with 33% who stated that business advisory was growing. Compliance is still a significant contributor to a firm's revenue.

Moreover, 50% of respondents indicated that none of their services are declining. It may be reasonable to infer that the promise of machine learning and AI is yet to impact small to medium practitioners. This would hold with the incrementalism espoused by Susskind (2015) where small incremental improvements with technology more inexorably towards full automation, albeit over a reasonably long time horizon.

The other strand that comes through from the qualitative interviews it the advisory work tends to be the domain of the partner or director. Compliance dominates the workload of staff members. It would be interesting to conduct further research to examine the profitability of the two streams of work although intuitively it holds that higher overheads extend to compliance activities as firms employ staff to conduct that work.

From the data analysed in this project it seems that practitioners are aware that the professional script of the last centre is changing although there does not yet appear to be an extraneous event, or defining jolt (A. Meyer, 1982), causing substantial change. Revision is well underway with practitioners actively experimenting with new services to cope with a forecast decline in compliance. There seems to be broad acceptance that their current source of compliance revenue may well be unsustainable in the longer term. From our data, only 7.88% of respondents in the quantitative survey held that technology would have no impact on their practice over time. Yet that time has yet to come.

6.2 Where to now for Public Practitioners?

In the qualitative interviews, respondents were asked about that revision and where they saw the practice in the future. The responses were remarkably similar, and all seemed to stem around public accountants focusing on providing information rather than data to clients.

> *"Accountants will be providing information on trends and a critical path for the business owner. As technology improves, a lot of things can be done by technology, but business owners don't want to waste their time (implementing it). Partners will implement the technology. Then that will lead to advisory. They will help business owners to analyse their accounts and build their profit. If you want to survive, you have to make money. It's quite broad. There is no certain definition of advisory. In real life, advisory is what a client needs to know and what you think they need to know. Clients don't need to know about financial accounting. They are not good at numbers and don't want to know. The ultimate goal for a business is profit so it will survive."*
>
> *Accountant A*

Accountant A is in her early thirties and running a start-up practice. Her focus is quite clearly on the corporate logic of profit and growth and she is almost dismissive of the traditional fiduciary logic so long a part of public practice. Her view of the future of public accountancy is a radical departure from the norm and represents quite a significant revision to the script of an accountant in practice. No longer will it be the role of the accountant to ensure that quality of financial reporting. She sees her role as a facilitator, helping clients embrace technological solutions to drive efficiency and profit. She sees this as a conduit to advisory. First, prove your worth as a technologist, then advise.

Accountant B was more guarded. A practitioner in his 50s with a mixture of audit and general compliance work, he was excited by the potential of technology. His view was the cloud computing was already well entrenched, describing it as "saturated" in Asia. His eye was on Blockchain, an exciting new technology in its infancy which has the potential to make a very substantial change in the way firms handle inventory. Originally designed for the digital currency Bitcoin, it is morphing into a kind of "digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value." (Tapscott & Tapscott, 2016). Yet this practitioner's view was slightly more jaundiced, informed by both fiduciary and corporate logics.

> *"Stocktaking is a good example and it is quite workable. However, with a stocktake, you can see the boxes but you don't know what's inside them. They could be empty! So I still think there is a need to fine tune the technology. There will still be a place for a physical stocktake."*

Accountant B

Whilst he is actively revising scripts for his practice, he still holds to the fiduciary logic of physically sighting stock rather than relying on technology to prove it is there. This is a middle ground, using technology for the obvious advantage of efficiency that it brings to the client but still maintaining the need to hold to fiduciary principals. Rather than replicate the normative script, he does see a place for technology in future practice.

He is also trying to enact the script by making a substantial change in the way he practices. He is merging with another accountant, with him focusing on audit and advisory and the other partner in blockchain. Rather than upskill himself, he sees merit in cross pollinating skills between partners.

> *"I am merging with another firm. My team will change and the operation will change. How it will work out I don't know. But the person I'm merging my business with is from a different background. We will need to harmonise to suit our practice. The other partner is already specialising in blockchain for companies. We are from two backgrounds. I will look for opportunities for him, and he will start to look for audit clients for me. That way we will increase our revenue.*
>
> *Accountant B*

The fact that he doesn't envisage changing the way that he practices might be seen as replication of a script rather than revision. However, the fact that he is merging his operation with an accountant with a vastly different skill set does suggest revision as he seeks advantages of scale and technological knowledge.

A third respondent was very much of the view that fiduciary logic was on the wane.

> *"You aren't going to be focused on the rear-view mirror but focused on where they are heading. What stage is their business? Is it in the entry stage, the growth stage or declining? What is their exit strategy? How can they maximise their current operations to make more profit? Recapitalisation? That's where the need for an accountant is going to be. No more number crunching. No more back office guy 'cause the computer is going to be doing that. If*

you want to become a robot, forget it. You have to become an extrovert. You have to talk to people. You have to say that I've got value. That's what I'm selling and they buy the service."

This is a significant statement because it also talks of the need for a different motivation and personality typically associated with accountancy. Thornton et al. (2005) characterised the mission of public accountants (from the standpoint of fiduciary logic) as building legitimacy and the prestige of the partnership. The basis of attention was to sell legitimacy. This was contrasted with the corporate logic of selling services and generating profits. This actor is clearly well advanced in revising scripting around corporate logics, eschewing the characteristics of the professional and rapidly adopting those of the corporate salesperson. Interestingly, although in a start-up, his experience was gained within a Big Four firm and this may have had a considerable influence in the way he sees the future with the attendant corporate logics espoused by these firms.

The corporatist characteristics of sales and marketing was not lost on Mole (2002) who was clear that advisory required strong relationships between the client and the practitioner and this point was taken up by one senior practitioner.

> *"As far as we can be certain of, there will be more automation. There will need to be more personalised services and the need to build relationships. That will be a very big thing. Clients will be able to get information quite readily. It will be turning that information into an outcome and building confidence with the client."*
>
> Accountant D

This observation was unique yet insightful. The underlining foundation is that both compliance engagements and business advice are dependent on a skill gap or resource constraint from the perspective of the client. Clients proactively seek out an accounting professional in order to comply with the statutory requirements. However, where accountants come quickly to mind when a SME owner faces a compliance or tax dilemma, the same may not be true for non-statutory needs. Only through the strength of relationships can accountants prosper in selling advice. (Carey & Tanewski, 2016) found that SMEs require time to assess the competence of external accountants in providing business advice. He suggests that information asymmetry and uncertainty is only minimised once a relationship has matured. In the example above, this practitioner acknowledges that the barriers to information are reducing. Clients can source advice readily by using search engines on the internet. This means that the accountant will need to prove their worth more than ever. This represents a significant script revision, with the practitioner acknowledging that adhering to fiduciary logics alone will not enable the firm of tomorrow to prosper.

There is little doubt that actors have identified that advisory services will take on increasing pre-eminence in the future. Advisory services by their nature are not subject to the same rigorous prescriptive standards as statutory accounting. Advisory is very broad in its definition and can take many forms. This in part may explain the tendency for accountants to gravitate towards the commercial logics in the absence of professional standards specific to the advisory space.

Throughout this chapter we have seen a tendency to prioritise commercial logics over fiduciary logic. However, to characterise professional accounting firms as having become wholly subservient to commercialism would be a gross over-simplification. The accountant in the twenty-first century is likely to embrace different logics – ranging from traditional fiduciary practices to entrepreneurial ones. There is likely to be some cherry picking where professionals will hijack between the oppositional logics (McPherson & Sauder, 2013).

The ascendancy of corporate logics is not confined to accountancy. Studies have pointed to the same pressures arising for legal practitioners. Whilst commercial logics have undoubted transformed accounting practice in recent decades, that is not to say that they have removed the fiduciary values of integrity, collegiality and due process (Carter & Spence, 2014). Professional logics endure even with the introduction of commercial logics are endemic to professional accounting. Professional bodies require accountants to complete a certain number of hours of continuing professional development. Tax advice will still remain an imperative for practitioners along with the optimal structuring of organisations. It will be incumbent on accountants in practice to remain current with changes in legislation and regulation. Perhaps the last word should be left for one of the qualitative respondents who sees dramatic change still some way off.

> *"Business advisory is always a part of what we are selling to the client. Right now, we don't have any clients where we just do advisory and we don't produce a tax return. I don't think this will happen in the next ten years. We'll still be doing compliance for them. "*
>
> *Accountant F*

In summary, therefore, we can see practitioners revising scripts around their future relevance. Some are actively pursuing quite significant changes as they revise their individual scripts. All seem aware that compliance will no longer prevail and that they will need to move from a place of comfort to a new paradigm of providing advice to clients. These business owners will not be compelled to use their services as they are with compliance. That is not to suggest that fiduciary logic is being discarded but that corporate logics are becoming more predominant. Actors are revising scripts to ensure their continued relevance.

Chapter Seven - Discussion

In this study there has been clear evidence of the competition between two distinct logics: those of the professions and corporate logics. The themes of technology, staff and the future of public practice work were strongly represented in the qualitative interviews and supported with quantitative data. Practitioners are grappling with how they will conduct their practice in the years to come. As we might expect from the literature, we see this experimentation (Lord & Smith, 1983) in preparation for a time when compliance will make up less income. Practitioners are aware that there is a threat looming, both to their financial viability and to their traditional work. Whilst fiduciary logic is still informing the discussion, corporate logics appear to predominate. The need to remain commercially viable and relevant to their client base seems to be in the ascendancy over traditional fiduciary logic.

7.1 Practitioners' Responses to the Threat of Automation

Susskind (2015) outlined two very different outcomes for the professions. Either professionals would utilise technology to streamline their practice and improve efficiency, an outcome closely aligned with corporate logics, or systems and machines gradually take on more of the tasks that we associate with those traditional professionals. These technologies would be either operating in isolation or "designed and operated by people who look quite unlike doctors and lawyers, teachers and accountants, and others". With this outcome, new technologies would substitute for professionals. Of the two likely outcomes, Susskind (2015) favours the latter. Whilst initially the two outcomes are likely to exist in parallel, eventually technology will incrementally render a lot of the tasks performed by professionals redundant as the machines will simply become more efficient than human workers. Frey and Osborne (2017) have predicted a rapid decline in the number of professionals over the next decade.

We might reasonably infer, therefore, that accountants in practice may have a dim view of their future prospects in the light of such predictions. Yet there was little evidence in the quantitative research that supported this. 66.36% somewhat or strongly agreed that technology would cause substantial disruption in the profession. When asked specifically about threats likely to impact their practice, only 12.55% of respondents selected artificial intelligence and machine learning. So, whilst on one hand practitioners appear to be acknowledging that future technological development will impact the profession as a whole, they have a very positive view of their individual future prospects. There is a sense that they are more closely aligned to the views of Brynjolfsson and McAfee (2014) that artificial intelligence and machine learning will enable people to work in conjunction with the technology to achieve more. Where the view of these authors is compelling is that we are currently at a point in time that they define as an "inflection point". In other words, the promise of artificial intelligence and machine learning is in its infancy and has yet to make a significant impact on the future of work. How long that may take is pure speculation. McAfee himself hedges by saying “just as it took decades to improve the steam engine to the point that it could fuel the Industrial Revolution, it’s taking time to refine digital technologies.” (Bernstein & Raman, 2015). The actors, in this case accounting practitioners, are necessarily in a situation of early revision, preparing for a situation that is likely to occur but has yet to impact them significantly. This is congruent with the view of DiMaggio and Powell (1983) who contended that actors in an institutional environment envision new institutions in order to advance interests that they hold dear, but which are “suppressed by extant logics”. Actors are imagining what the future may look without being armed with the facts that come with that scenario actually happening. As a result, this sensemaking is likely to be subjective.

With that caveat in mind, it is interesting to view how practitioners are actually trying to make sense of this potential new environment. 78.05% somewhat or strongly agreed that such technologies would free up their time to offer business advisory services to their clients. 72.06% of respondents somewhat or strongly agreed they would be able to sell more services to their clients.

There is a strong alignment to corporate logic here with the sense that accountants will sell advice in the market, no doubt competing against other providers of these services. These non-statutory services are not closely aligned with professional logics. Advisory work is by its nature subjective, focusing on a future state rather than the more familiar work of statutory compliance where the practitioner draws on professional logics to assemble data from a period that has already passed. In compliance work, the practitioner is able to draw on the professional logic of certainty. They are reporting on something that has happened. Advisory work lacks that essential characteristic. When we think back to the time of Waterhouse, the profession was founded on the need to provide certainty and yet the future may be less about certainty than planning and forecasting.

7.2 Is Professionalism Threatened?

The work of Thornton et al. (2005) laid out the concept of competing logics. Although not explicitly stated in that article, this may give the reader the idea that one logic must prevail over another, that there must be equal gains and losses to make up the total pie. Goodrick and Reay (2011) argue that rather than compete, a cooperative relationship may in fact exist between institutional logics. This implies that a “win-win” for both logics is indeed possible where an increase in one logic does not necessarily mean a corresponding reduction in the strength of another. Work practices can be influenced by multiple logics.

Neither the qualitative nor the quantitative research supports the assertion that one logic is overwhelming the other. Practitioners are, after all, still producing a great deal of statutory compliance work. However, there is a sense that professional logics do not predominate when practitioners reflect on the need to offer services other than compliance in the future.

This was tested with the quantitative survey. Three questions were deliberately introduced to test how strong fiduciary logic was amongst respondents. The three questions came from the qualitative interviews were strongly aligned with ethical considerations as set out by the Accounting Professional and Ethical Standards Board's *Code of Ethics for Professional Accountants* (Board, 2018). Respondents were asked whether they agreed or disagree about the following statements:

1. *Automation will impact my duty of care by removing direct oversight of applying professional skill and knowledge.*
2. *Automation of some tasks may mean that accountants may no longer be able to assure stakeholders that they are representing facts accurately and completely in all material respects.*
3. *I have concerns around security of information and my duty to keep client data confidential.*

33.66% either strongly or somewhat agreed with the statement that automation would impact their duty of care as a practitioner. 37.13% either strongly or somewhat agreed that technology would mean that accountants are no longer able to assure stakeholders that they are representing facts accurately and materially. Finally, 41.66% had concerns around security of information in either somewhat or strongly agreeing with the statement.

So whilst it could be argued that fiduciary logic is subservient to corporate logic in the research, there is evidence that a substantial minority still harbour concerns about the impact of technology on established professional ethics. In other words, fiduciary logic is still present even as corporate logic dominates.

This needs to be tempered by the reality that the research is asking practitioners to envisage a future state that doesn't currently exist. They are trying to make sense of a world where they may need to sell services to their clients and potential ones, adding value and proving their worth on an ongoing basis in a much more commercial fashion than they may be currently. This is against a backdrop where professional standards are still going to be articulated and codified by professional bodies and increasingly, government. The practitioner cannot abandon professional norms to pursue a purely commercial relationship with their clients. The professional logics remain even with the introduction of commercial logics (Carter & Spence, 2014). If you like, they form part of the practitioner's DNA and inform their actions in everything they do.

Moreover, Gooderham et al. (2004) found that in order to sell advisory services, accountants need to build trust with their clients. She found that the trust emanates from the compliance work produced over time. This is a significant finding. The corporate logic is tempered by the need for the practitioner to produce reliable and accurate financial records that the client can depend on. The accountant derives their legitimacy from adhering to their traditional professional logic. The promise of advisory work is contingent on the trust formed from the compliance relationship.

Chapter Eight - Conclusion

When starting out on this thesis, I was initially focused on the impact that artificial technology and machine learning would have on SME accountants in practice. During the qualitative interviews, it quickly became evident that the that this fourth industrial revolution would have a profound impact on accountants at all stages of their career and their professional bodies.

If we focus on the initial area of the impact of technology, I anticipated that there would be a deeply despondent view of the future for accountancy held by those in practice. The Frey and Osborne (2017) article paints a very dim future for accountancy. This was also borne out in the New Zealand context by the New Zealand Institute of Economic Research (2015). However, the overwhelming consensus from the research was that the arrival of artificial intelligence and machine learning was to be welcomed and not feared. Practitioners are optimistic about the future and clearly believe that there is a ready market for advisory services when compliance revenue begins to decline. I now hold the view that the harbingers of doom for the profession may well have overstated their case. To paraphrase Mark Twain, the profession's death has been greatly exaggerated. Rather, there is considerable evidence to suggest that whilst accountancy will change significantly over the next few decades, there will still be a vital role for financial advisors who can interpret the data and give sage and timely advice to SME business owners. Aligned to this is the fact that AI to date promises much but has yet to make a considerable impact.

This enthusiasm for the future may well need to be tempered by the fact that advisory revenue is still contributing a relatively small amount to the average SME firm's revenue. There are three concerns that arise. The first is that practitioners may assume that it will be relatively easy to transition to advisory services from compliance. All that is needed is the time to concentrate on it. Machines taking over their 'numbers' work will allow them to proselytise current and potential clients, converting them to the advantages of advice. Some caution could be advisable in making this assumption. Whilst accountants are well placed to expand their service offerings into advisory, the real challenge will be in "closing the expectation gap" by convincing SME owners that they have the necessary expertise to engender business success (Blackburn, Carey, & Tanewski, 2018). We have seen that trust is built between the practitioner and the client by the process of compliance but the client may harbour doubts about the practitioner's relevance when considering business advice.

The second concern is that practitioners may assume that there is sufficient client demand for advisory services, or at least they will not struggle to build this revenue stream. Based on results to date, it seems that there is still a very long way to go for many firms in establishing themselves as advisors to SMEs. SME practices are still deriving very little of their income from advisory services. Any significant jolt may very well decimate the number of practitioners and there seems to be little evidence of practitioners upskilling to prepare themselves.

The third is that accountants in practice seem to assume that business owners will only consider accountants as a source of reliable advice. That really doesn't stand scrutiny with the rise of business coaches, many who follow a franchised system to provide advice to owners without any of the incumbent burden of professional membership or regulatory fiat.

There is compelling evidence to suggest that corporate logics are predominating at present. Nevertheless, fiduciary logic is still a concern for a large minority of practitioners. Based on the qualitative interviews, there does appear to be a bias towards corporate logics amongst start-up practices. More established firms, particularly those focusing on audit, are still wedded to fiduciary concerns. In particular, we can make a reasonable inference here that these firms are more tightly controlled in the auditing environment with substantial regulatory and legislative controls around their practice.

Concerns over graduates being 'fit for purpose' predominate. There exists a challenge for academics to prepare students for a career where traditional roles are going to change so dramatically. The traditional curriculum, focused strongly on technical skills, will clearly need to develop into one where advisory skills become transcendent along with softer skills that build rapport and understanding with clients. I would venture that these challenges are not unique to academics in accountancy but would extend to any academic teaching professional courses. Data analytics, whilst seemingly ignored by the smaller practitioner, will become a sought-after skill. One wonders whether SME practitioners ignore this opportunity at their peril and more research from the perspective of the client would be very useful to test the assumption that a market exists here.

Whilst generational shifts are unclear, there does seem to be a strong willingness for younger practitioners to prioritise technology over all other inputs into their businesses, including human capital. These 'start-up' practitioners are not constrained by existing investments in staff, premises or legacy systems. They are free to adopt new technologies as they arise and structure their practices in new and innovative ways. The use of contractors to fill gaps is example of this, where mature practices may be reluctant to do so. Without the burden of overheads, these younger practitioners may be more nimble and able to respond more quickly to opportunities. The traditional 'firm' may be very different in the future with fewer employees, more contractors and perhaps even 'virtual' offices. There is also some evidence that the characteristics of the accountancy profession may be eroded into the future. Certainly, the imperatives of the market will force practitioners to adopt new services in the advisory space. That is not to presuppose that fiduciary concerns will be ignored. Whilst in the

New Zealand context regulatory and legislative requirements are much looser than other jurisdictions, there are still solid fiduciary constraints placed on accountants by both professional bodies and government alike. Rather than a future where corporate logics trump fiduciary logics, the idea of a constellation of logics envisaged by Goodrick and Reay (2011) may be closer to reality.

Public Accountancy is likely to continue as a profession well into the future but in reduced numbers. Quite how many firms might exist in a generation is open to conjecture. Technological change has already reduced the number of accountants required to produce compliance work in practices. Certainly, there must be concern about the number of graduates required to sustain a dwindling workforce. Those practitioners who will survive and thrive will be those who manage to add value to their clients with non-statutory services.

So, what does this all mean for the accountancy profession? There is little doubt that accountants in practice are questioning the relevance of the existing curriculum when focusing on future needs in their practices. There is little, if any, focus on business advisory. Courses continue to focus on core technical skills for future compliance practitioners. There seems widespread agreement that these skills are simply not going to be relevant in the near future. Data analytics, for instance, is conspicuously absent from the curricula of all New Zealand accounting bachelors degrees. There needs to be more urgency in making degrees fit for purpose in the new environment. That may mean teaching less traditional subjects with the need to recruit academics with different skill sets.

Academics are not the only ones who will face challenges in the new environment. With the likely decrease in the number of accounting roles required in the future, professional bodies may well see falling rolls as well. It should be noted that this scenario is not limited to accountancy but applies to all professional groups. There could be a vital role in providing training to new graduates in the advisory field. Although the exam structure for both CPA Australia and CAANZ contains capstone modules on integrating technical accounting knowledge, there is still very little that teaches how to advise clients. Moreover, new skills will be required by existing practitioners in order to inform business decisions with their clients. For both students and practitioners alike, there will be a real urgency to improve communication skills to build trust and confidence. The provision of lifetime learning opportunities by the professional bodies will be essential. Surely professional bodies are best placed to provide this given their close relationship with accountants in practice. Their members are already required to commit to continuing professional development and the professional bodies are able to offer pertinent courses that count towards this along with specialist conferences and events. To date these bodies have been adept at warning their members of the changes to come. The real challenge will be leading that change proactive amongst their members and upskilling them for the new environment.

There are some areas for future research that would be very useful in understanding the accounting environment in New Zealand. There are four areas that come from this research, although they are not exhaustive. The perceptions of SME clients towards accountants providing advice has been the subject of research in Australia but the need to replicate this research in the New Zealand environment seems pressing. Additional research in understanding the motivations and aspirations of undergraduates would also be useful in fleshing out the future accounting environment and discovering where future employees see themselves going with their careers. Thirdly, a study of the way accountancy is taught in New Zealand and the views of the accountants who employ graduates would be insightful. Finally, there seems to be very little research into professional bodies and their strategies for survival and relevance into the future.

There are limitations in this research. The number of qualitative interviews was limited by the number of public practitioners who belong to CPA Australia with a much larger number as members of CAANZ. Moreover, the response rate to the quantitative interviews was disappointing but in line with expectations given the number of surveys received by accountants in practice and limitations to their time. Nevertheless, I am of the view the findings are congruent with the anecdotal commentary I receive attending professional events.

In concluding, the way in which SME accounting practitioners are responding to change is aligned with macro trends for capitalism in general. Digitisation and the 'gig' economy are already pervasive ideas that are widely practiced. Technology is not only reshaping how accountancy is done, but also how business organises itself. The impact allows smaller firms the opportunity to become more nimble and competitive through the selective use of technology and human resources. The automation of tasks using AI and machine learning is really only another step on a continuum that started with the introduction of computerisation in the 1970s. The use of specialist contractors to conduct specific projects for SME firms may be the start of a trend that sees firms more widely adopt the contractor model in the future. It shows that accountants are not immune from the macro trends that pervade in the wider economy. The survival of the SME accounting firm will not so much pivot on the advent of AI or machine learning, but on the practitioner's ability to persuade SME clients that their advisory services have value. That will be the greatest challenge.

References

Ahmed, E., & Braithwaite, V. (2005). Understanding small business taxpayers: Issues of deterrence, tax morale, fairness and work practice. *International Small Business Journal, 23*(5), 539-568. doi:10.1177/0266242605055911

Arthur, W. B. (2017). Where is technology taking the economy? We are creating an intelligence that is external to humans and housed in the virtual economy. This is bringing us into a new economic era--a distributive one--where different rules apply. *McKinsey Quarterly*(4), 32-43.

Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation†. *Journal of Economic Perspectives, 29*(3), 3-30. doi:10.1257/jep.29.3.3

Barley, S. (2008). Coalface Insitutionalism. In R. Greenwood, C. Oliver, K. Sahlin, & R. Suddaby (Eds.), *The Sage Handbook of Organisational Institutionalism*. London: Sage.

Barley, S., & Tolbert, P. (1997). Institutionalization and structuration: Studying the links between action and institution. *Organization Studies, 18*(1), 93-117. doi:10.1177/017084069701800106

Baum, J. A. C., & Haveman, H. A. (1997). Love thy neighbor? Differentiation and agglomeration in the manhattan hotel industry, 1898-1990. *Administrative Science Quarterly, 42*(2), 304-338. doi:10.2307/2393922

Berger, P. L., & Luckmann, T. (1967). *The social construction of reality: a treatise in the sociology of knowledge*: Penguin P.

Bernstein, A., & Raman, A. (2015). The Great Decoupling: An Interview with Erik Brynjolfsson and Andrew McAfee. *Harvard Business Review*(June 2015).

Bevort, F., & Suddaby, R. (2015). Scripting professional identities: how individuals make sense of contradictory institutional logics. *Journal of Professions and Organisations, 3*(1).

Blackburn, R., Carey, P., & Tanewski, G. (2010). *Business advice to SMEs: Professional competence, trust and ethics.* London: Association of Chartered Certified Accountants.

Blackburn, R., Carey, P., & Tanewski, G. (2018). Business advice by accountants to SMEs: relationships and trust and ethics. *Qualitative Research in Accounting & Management*(3), 358. doi:10.1108/QRAM-04-2017-0022

Board, A. P. E. S. (2018). APES 110 Code of Ethics for Professional Accountants (inlcuding independence standards). Retrieved 22 November 2019 2019

Brint, S. G. (1994). *In an age of experts : the changing role of professionals in politics and public life*: Princeton University Press.

Bryman, A., & Bell, E. (2015). *Business research methods* (Fourth edition ed.). Oxford, United Kingdom.: Oxford University Press.

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age : work, progress, and prosperity in a time of brilliant technologies*. New York, NY.: W. W. Norton & Company.

Brynjolfsson, E., & McAfee, A. (2015). Will humans go the way of horses? Labor in the second machine age. *Foreign Affairs, 94*(4), 8-14. doi:http://www.foreignaffairs.com/archive

Brynjolfsson, E., & McAfee, A. (2017). The business of artificial intelligence: What it can - and cannot - do for your organization. *Harvard Business Review Digital Articles*, 3-11.

Cameron, R., & Molina-Azorin, J. (2011). The acceptance of mixed methods in business and management research. *International Journal of Organizational Analysis*(3), 256. doi:10.1108/19348831111149204

Carey, P. (2015). External accountants' business advice and SME performance. *Pacific Accounting Review, 27*(2), 166-188. doi:10.1108/par-04-2013-0020

Carey, P., & Tanewski, G. (2016). The provision of business advice to SMEs by external accountants. *Managerial Auditing Journal, 31*(3), 290-313. doi:10.1108/maj-12-2014-1131

Carter, C., & Spence, C. (2014). Being a successful professional: An exploration of who makes partner in the big 4. *Contemporary Accounting Research, 31*(4), 949-981. doi:10.1111/1911-3846.12059

Cavana, R., Sekaran, U., & Delahaye, B. (2001). *Applied business research : qualitative and quantitative methods* ([Australian ed.] ed.): Wiley.

Charmaz, K. (2013). *Constructing grounded theory* (2nd ed ed.). Los Angeles, California: Sage.

Courtis, J., & Zaid, O. (2002). Early employment problems of Australian accounting graduates: An exploratory study. *Accounting Forum, 26*(3/4), 320-339. doi:10.1111/1467-6303.00092

Courtney, A. (2018). Learning to love AI: Dr Ayesha Khanna sees a new way forward with artificial intelligence. *In the Black*(1 November, 2018).

Covaleski, M. A., Dirsmith, M. W., Heian, J. B., & Samuel, S. (1998). The calculated and the avowed: Techniques of discipline and struggles over identity in big six public accounting firms. *Administrative Science Quarterly, 43*(2), 293. doi:10.2307/2393854

Currie, W. (2004). The organizing vision of application service provision: a process-oriented analysis. *Information and Organization, 14*(4), 237-267. doi:https://doi.org/10.1016/j.infoandorg.2004.07.001

Currie, W. (2011). Institutional Theory of Information Technology. In R. Galliers & W. Currie (Eds.), *The Oxford handbook of management information systems. [electronic resource] : critical perspectives and new directions*. Oxford, United Kingdom.Institutional Theory of Information Technology: Oxford University Press.

D'Aunno, T., Succi, M., & Alexander, J. A. (2000). The role of institutional and market forces in divergent organizational change. *Administrative Science Quarterly, 45*(4), 679-703. doi:10.2307/2667016

Daish, S. (2018). Powering beautiful experiences that go beyond accounting: the development of machine learning at Xero. Retrieved 14 December 2019 from https://fintechnz.org.nz/2018/08/16/powering-beautiful-experiences-that-go-beyond-accounting-the-development-of-machine-learning-at-xero/

Department, I. R. (2018). SPS 05/07 - Non-disclosure right for tax advice documents (July 2005).

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*(2), 147.

Dyer, L. M., & Ross, C. A. (2007). Advising the small business client. *International Small Business Journal, 25*(2), 130-151. doi:10.1177/0266242607074517

Ferguson, L., & Ramsay, J. (2010). Development of a profession. *Professional Safety, 55*(10), p24-30.

Fischer, B. (2015). The End of Expertise. *Harvard Business Review Digital Articles*, 2-4.

Flick, U. (2015). *Introducing research methodology : a beginner's guide to doing a research project* (Second edition ed.): SAGE.

Fogarty, T. J. (2014). The bloom is off the rose: Deprofessionalization in public accounting. In S. Mintz (Ed.), *Accounting for the Public Interest: Perspectives on Accountability, Professionalism and Role in Society* (pp. 51-72). Dordrecht: Springer Netherlands.

Freidson, E. (1999). Theory of professionalism: Method and substance. *International Review of Sociology, 9*(1), 117-129. doi:10.1080/03906701.1999.9971301

Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change, 114*, 254-280. doi:10.1016/j.techfore.2016.08.019

Friedland, R., & Alford, R. (1991). Bringing society back in: Symbols, practices, and institutional contradictions. In W. W. Powell & P. J. DiMaggio (Eds.), *The New Institutionalism in Organizatational Analysis.* (pp. pp. 232-266). Chicago: University of Chicago Press.

Gibb, A. (1997). Small firms' training and competitiveness. Building upon the small business as a learning organisation. *International Small Business Journal, 15*(3), 13-29. doi:10.1177/0266242697153001

Gleeson-White, J. (2011). *Double entry : how the merchants of Venice shaped the modern world : and how their invention could make or break the planet*. Crows Nest, N.S.W.: Allen & Unwin.
Glynn, M. (2013). Patricia Thornton, William Ocasio & Michael Loundsbury; the insitutional logics perspective: a new approach to culture, structure and process. [The Institutional Logics Perspective: A New Approach to Culture, Structure, and Process, Patricia Thornton, William Ocasio, Michael Lounsbury]. *Administrative Science Quarterly, 58*(3), 493-495.
Gooderham, P. N., Tobiassen, A., Døving, E., & Nordhaug, O. (2004). Accountants as sources of business advice for small firms. *International Small Business Journal, 22*(1), 5-22. doi:10.1177/0266242604039478
Goodrick, E., & Reay, T. (2011). Constellations of institutional logics: Changes in the professional work of pharmacists. *Work and Occupations, 38*(3), 372-416. doi:10.1177/0730888411406824
Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology, 91*(3), 481.
Gray, D. (2018). *Doing Research in the Real World* (4th edition ed.). Los Angeles, California: Sage.
Greenwood, R., Díaz, A., Li, S., & Lorente, J. (2010). The multiplicity of institutional logics and the heterogeneity of organizational responses. *Organization Science, 21*(2), 521.
Greenwood, R., & Hinings, C. (1993). Understanding strategic change: The contribution of archetypes. *The Academy of Management Journal, 36*(5), 1052.
Greenwood, R., & Hinings, C. (1996). Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of Management Review, 21*(4), 1022-1054. doi:10.5465/amr.1996.9704071862
Greenwood, R., Hinings, C., & Suddaby, R. (2002). Theorising change: The role of professional associations in the transformation of instutionalized fields. *Academy of Management Journal, 45*(1), 58-80. doi:10.5465/3069285
Greenwood, R., Oliver, C., Lawrence, T., & Meyer, R. (2017). *The Sage andbook of organizational institutionalism* (2nd edition ed.). London, United Kingdom: Sage Reference.
Greenwood, R., & Suddaby, R. (2006). Institutional entrepreneurship in mature fields: The big five accounting firms. *The Academy of Management Journal, 49*(1), 27.
Guba, E. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *ECTJ: Educational communication and technology, 29*(2), 75. doi:10.1007/bf02766777
Guetterman, T., Babchuk, W., Howell Smith, M., & Stevens, J. (2019). Contemporary approaches to mixed methods–grounded theory research: A field-based analysis. *Journal of Mixed Methods Research, 13*(2), 179-195. doi:10.1177/1558689817710877
Hallett, T. (2010). The myth incarnate: Recoupling processes, turmoil, and inhabited institutions in an urban elementary school. *American Sociological Review, 75*(1), 52.
Hammersley, M. (2011). *Methodology : who needs it?* Los Angeles, California.: Sage.
Hannan, M. T., & Freeman, J. (1993). *Organizational ecology. [electronic resource]*. Cambridge, Massachusets Harvard University Press.
Haug, M. R. (1975). 1975 NCSA PRESIDENTIAL ADDRESS: The Deprofessionalization of Everyone? *Sociological Focus, 8*(3), 197-213.
Hoffman, A. (1999). Institutional evolution and change: Environmentalisam and the U.S. Chemical industry. *Academy of Management Journal, 42*(4), 351-371. doi:10.2307/257008
Jackson, D. (2016). How artificial intelligence and machine learning will transform accounting. Retrieved from https://www.xero.com/blog/2017/02/artificial-intelligence-machine-learning-transform-accounting/
Johnson, G., Smith, S., & Codling, B. (2000). Microprocesses of institutional change in the context of privatization. *Academy of Management Review, 25*(3), 572-580. doi:10.5465/AMR.2000.3363519
Johnson, R., McGowan, M., & Turner, L. (2010). Grounded theory in practice: Is it inherently a mixed method? *Research in the Schools, 17*(2), 65-78.

Jones, E. (1995). *True and Fair: A History of Price Waterhouse.* London, United Kindgom.: Hamish Hamilton.

Kaplan, J. (2016). *Artificial intelligence. [electronic resource] : what everyone needs to know*: Oxford University Press.

Khader, N., Yoon, S. W., & Lashier, A. (2016). Pharmacy robotic dispensing and planogram analysis using association rule mining with prescription data. *Expert Systems with Applications, 57*, 296-310. doi:10.1016/j.eswa.2016.02.045

Kline, R. R. (2011). Cybernetics, automata studies, and the dartmouth conference on artificial intelligence. *IEEE Annals of the History of Computing, Annals of the History of Computing, IEEE, IEEE Annals Hist. Comput.*(4), 5. doi:10.1109/MAHC.2010.44

Kury, K., Thornton, P. H., & Jones, C. (2005). Institutional Logics and Institutional Change in Organizations: Transformation in Accounting, Architecture, and Publishing. In *Transformation in Cultural Industries* (Vol. 23, pp. 125-170): Emerald Group Publishing Limited.

Lander, M., Koene, A., & Linssen, S. (2013). Committed to professionalism: Organizational responses of mid-tier accounting firms to conflicting institutional logics. *Accounting, Organizations and Society, 38*(2), 130-148. doi:https://doi.org/10.1016/j.aos.2012.11.001

Lawrence, T., & Suddaby, R. (2006). Institutions and Insitutional Work. In S. Clegg, C. Hardy, T. Lawrence, & W. Nords (Eds.), *The Sage Handbook of Organisational Studies*. Thousand Oaks: Sage.

Lindblom, C. E. (2010). The Science of "Muddling" Through. *Emergence: Complexity & Organization, 12*(1), 70-80.

Lok, J. (2010). INSTITUTIONAL LOGICS AS IDENTITY PROJECTS. *Academy of Management Journal, 53*(6), 1305-1335. doi:10.5465/AMJ.2010.57317866

Lord, R., & Kernan, M. (1987). Scripts as determinants of purposeful behaviour in organizations. *Academy of Management Review, 12*(2), 265-277. doi:10.5465/AMR.1987.4307831

Lord, R., & Smith, J. (1983). Theoretical, information processing, and situational factors affecting attribution theory models of organizational behavior. *Academy of Management Review, 8*(1), 50-60. doi:10.5465/AMR.1983.4287658

Lounsbury, M. (2008). Institutional rationality and practice variation: New directions in the institutional analysis of practice. *Accounting, Organizations and Society, 33*(4-5), 349-361. doi:10.1016/j.aos.2007.04.001

Low, M., Botes, V., Rue, D., & Allen, J. (2016). Accounting Employers' Expectations--The Ideal Accounting Graduates. *e-Journal of Business Education and Scholarship of Teaching, 10*(1), 36-57.

Maister, D. H., Green, C. H., & Galford, R. M. (2004). *The trusted advisor*: Free Press.

Malhotra, N., & Morris, T. (2009). Heterogeneity in Professional Service Firms. *Journal of Management Studies, 46*(6), 895-922. doi:10.1111/j.1467-6486.2009.00826.x

Manyika, J., Chui, M., Bughin, J., Dobbs, R., Bisson, P., & Marrs, A. (2013). Disruptive technologies: Advances that will transform life, business, and the global economy. Retrieved 19 September 2018 from https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/disruptive-technologies

Markova, G., Ford, R. C., Dickson, D. R., & Bohn, T. M. (2013). Professional associations and members' benefits: What's in it for me? *Nonprofit Management & Leadership, 23*(4), 491-510. doi:10.1002/nml.21076

Marriott, N., & Marriott, P. (2000). Professional accountants and the development of a management accounting service for the small firm: barriers and possibilities. *Management Accounting Research, 11*(4), 475-492. doi:10.1006/mare.2000.0142

McPherson, C. M., & Sauder, M. (2013). Logics in Action: Managing Institutional Complexity in a Drug Court. *Administrative Science Quarterly, 58*(2), 165-196. doi:10.1177/0001839213486447

Meyer, A. (1982). Adapting to environmental jolts. *Administrative Science Quarterly, 27*(4), 515-537. doi:10.2307/2392528

Meyer, J., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology, 83*(2), 340-363. doi:10.1086/226550
Meyer, J. W., & Scott, W. R. (1992). *Organizational environments : ritual and rationality* (Updated ed ed.): Sage Publications.
Miller, D. (1983). The Correlates of Entrepreneurship in Three Types of Firms. *Management Science*(7), 770.
Mintzberg, H. (1973). Strategy-Making in Three Modes. *California Management Review, 16*(2), 44-53.
Mintzberg, H. (1978). Patterns in Strategy Formation. *Management Science, 24*(9), 934.
Mintzberg, H. (1979). *The structuring of organizations : a synthesis of the research*. Englewood Cliffs, NJ: Prentice-Hall.
Mole, K. (2002). Business Advisers' Impact on SMEs: An Agency Theory Approach. *International Small Business Journal, 20*(2), 139-162. doi:10.1177/0266242602202002
New Zealand Institute of Economic Research. (2015). *Disruptive Technologies, Risks, Opportunities - Can New Zealand make the most of them?* . Retrieved from https://nzier.org.nz/static/media/filer_public/6d/6e/6d6ecf8b-032c-4551-b0a7-8cd0f39e2004/disruptive_technologies_for_caanz.pdf
O'Reilly, K. (2012). *Ethnographic methods* (2nd ed ed.). New York: Routledge.
OECD. (2018). *Australian Services Trade in the Global Economy*. Paris, France: OECD Publishing.
Outsourcing, M. P. (2017, April 1, 2017). FDA Clears First Robotic System for Dental Implant Procedures. *Medical Product Outsourcing.* Retrieved 3 Dec 2019 2019 from http://ezproxy.massey.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=heh&AN=122320274&site=eds-live&scope=site
Pache, A., & Santos, F. (2013). How do Individuals Experience Competing Institutional Logics. In E. Boxenbaum & M. Lounsbury (Eds.), *Institutional Logics in Action*. United Kingdom: Emerald Group Publishing Limited.
Pettigrew, A. M. (2011). *The awakening giant : continuity and change in Imperial Chemical Industries*: Routledge.
Plano Clark, V., & Ivankova, N. (2016). *Mixed methods research : a guide to the field*: SAGE.
Poutanen, S., & Kovalainen, A. (2016). Professionalism and Entrepreneurialiasm. In M. Dent, I. Bourgeault, J. Denis, & E. Kuhlmann (Eds.), *The Routledge Companion to the Professions and Professionalism* (pp. 116-128). London, United Kingdom: Routledge.
Powell, W. (1991). Expanding the Scope of Insititutional Analysis. In *The New Insititutionalism in Organizational Analysis* (pp. 183-202). Chicago: University of Chicago Press.
Ramirez, C. (2009). Constructing the governable small practitioner: The changing nature of professional bodies and the management of professional accountants' identities in the UK. *Accounting, Organizations and Society, 34*(3), 381-408. doi:10.1016/j.aos.2008.05.004
Ramirez, C., Carter, C., Stringfellow, L., & Maclean, M. (2015). Beyond segments in movement: a "small" agenda for research in the professions. *Accounting, Auditing & Accountability Journal, 28*(8), 1341-1372. doi:10.1108/aaaj-01-2015-1946
Reay, T., & Hinings, C. (2005). The Recomposition of an Organizational Field: Health Care in Alberta. *Organization Studies, 26*(3), 351-384. doi:10.1177/0170840605050872
Reay, T., & Hinings, C. (2009). Managing the rivalry of competing institutional logics. *Organization Studies, 30*(6), 629-652. doi:10.1177/0170840609104803
Richardson, A., & Jones, D. (2007). Professional "brand", personal identity and resistance to change in the Canadian accounting profession: a comparative history of two accounting association merger negotiations. *Accounting History, 12*(2), 135-164. doi:10.1177/1032373207076035
Roberts, P., & Greenwood, R. (1997). INTEGRATING TRANSACTION COST AND INSTITUTIONAL THEORIES: TOWARD A CONSTRAINED-EFFICIENCY FRAMEWORK FOR UNDERSTANDING ORGANIZATIONAL DESIGN ADOPTION. *Academy of Management Review, 22*(2), 346-373. doi:10.5465/AMR.1997.9707154062

Russel, K., Siegel, G., & Kulesza, C. (1999). Counting More, Counting Less: Transformations in the Management Accounting Profession. *Strategic Finance, 81(3)*(38).
Sarasvathy, S. (2007). *Effectuation : Elements of entrepreneurial expertise*. Northampton, Massachusetts: Edward Elgar.
Schensul, J., & LeCompte, M. (2013). *Essential ethnographic methods : a mixed methods approach* (2nd ed ed.). Lanham, Maryland: AltaMira Press.
Scott, W. R. (1987). The Adolescence of Institutional Theory. *Administrative Science Quarterly, 32*(4), 493-511. doi:10.2307/2392880
Sine, W. D., & David, R. J. (2003). Environmental jolts, institutional change, and the creation of entrepreneurial opportunity in the US electric power industry. *Research Policy, 32*(2), 185-207. doi:10.1016/S0048-7333(02)00096-3
Stewart, S. A., Castrogiovanni, G. J., & Hudson, B. A. (2016a). A foot in both camps: role identity and entrepreneurial orientation in professional service firms. *International Journal of Entrepreneurial Behavior & Research*(5), 718. doi:10.1108/IJEBR-09-2015-0201
Stewart, S. A., Castrogiovanni, G. j., & Hudson, B. A. (2016b). A foot in both camps: role identity and entrepreneurial orientation in professional service firms. *International Journal of Entrepreneurial Behavior & Research, 22*(5), 718-744. doi:10.1108/ijebr-09-2015-0201
Suddaby, R., & Greenwood, R. (2005). Rhetorical Strategies of Legitimacy. *Administrative Science Quarterly, 50*(1), 35-67. doi:10.2189/asqu.2005.50.1.35
Suddaby, R., & Muzio, D. (2015). Theoretical Perspectives on the Professions. In L. Empson, D. Muzio, J. P. Broschak, & R. Hinings (Eds.), *The Oxford Handbook of Professional Service Firms*. Oxford, United Kingdom: Oxford University Press.
Susskind, R. S., D. (2015). *The Future of the Professions. How Technology will Transform the Work of Human Experts.* Oxford, United Kingdom. : Oxford University Press.
Tapscott, D., & Tapscott, A. (2016). *Blockchain revolution : how the technology behind bitcoin is changing money, business and the world*. New York: Portfolio / Penguin.
Tashakkori, A., & Teddlie, C. (2010). *Sage handbook of mixed methods in social & behavioral research* (2nd ed ed.). London, United Kingdom: Sage Publications.
Thornton, P., Jones, C., & Kury, K. (2005). Institutional Logics and Institutional Change in Organizations: Transformation in Accounting, Architecture, and Publishing. In *Transformation in Cultural Industries* (Vol. 23, pp. 125-170): Emerald Group Publishing Limited.
Thornton, P., & Ocasio, W. (1999). Institutional logics and the historical contingency of power in organizations : Executive succession in the higher education publishing industry, 1958-1990. *Logiques institutionnelles et contingence historique du pouvoir au sein des organisations : Les successions aux postes de direction dans le secteur de l'édition de l'enseignement supérieur, 1958-1990*(3), 801.
Thornton, P., & Ocasio, W. (2008). Institutional Logics. In *The Sage Handbook of Organizational Institutionalism*

London, United Kingdom.: Sage Publications Ltd.
Thornton, P., Ocasio, W., & Lounsbury, M. (2012). *The institutional logics perspective : a new approach to culture, structure, and process*: Oxford : Oxford University Press, 2012.
Von Nordenflycht, A. (2007). Is Public Ownership Bad for Professional Service Firms? Ad Agency Ownership, Performance, and Creativity. *The Academy of Management Journal*(2), 429.
Wajcman, J. (2017). Automation: is it really different this time? *Br J Sociol, 68*(1), 119-127. doi:10.1111/1468-4446.12239
Walsh, I. (2015). Using quantitative data in mixed-design grounded theory studies: an enhanced path to formal grounded theory in information systems. In (Vol. 24, pp. 531-557).
Wang, P., & Swanson, E. B. (2007). Launching professional services automation: Institutional entrepreneurship for information technology innovations. *Information and Organization, 17*(2), 59-88. doi:10.1016/j.infoandorg.2007.02.001

Weick, K. (1988). Enacted sensemaking in crisis situations. *Journal of Management Studies, 25*(4), 305-317. doi:10.1111/j.1467-6486.1988.tb00039.x

Weick, K., Sutcliffe, K., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science, 16*(4), 409. doi:10.1287/orsc.1050.0133

Westney, D. E. (2005). *Institutionalization Theory and the Multinational Corporation* (S. Ghoshal & D. Westney Eds. 2nd ed.). Basingstoke: Palgrave Macmillan.

Westphal, J. D., Gulati, R., & Shortell, S. M. (1997). Customization or Conformity? An Institutional and Network Perspective on the Content and Consequences of TQM Adoption. *Administrative Science Quarterly, 42*(2), 366-394. doi:10.2307/2393924

Wofford, J. C. (1994). An examination of the cognitive processes used to handle employee job problems. *Academy of Management Journal, 37*(1), 180-192. doi:10.2307/256776

Zealand, A. F. N. (2018). *Artificial Intelligence: shaping a future New Zealand: an analysis of the potential impact and opportunity of artificial intelligence on New Zealand's society and economy.* In A. Forum (Ed.) Retrieved from http://natlib-primo.hosted.exlibrisgroup.com.ezproxy.massey.ac.nz/NLNZ:NLNZ:NLNZ_ALMA11307223320002836

Zeff, S. A. (2003). How the U.S. accounting profession got where it is today: Part II. *Accounting Horizons, 17*(4), 267-286. doi:10.2308/acch.2003.17.4.267

Appendix One – Information Sheet & Qualitative Questions

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

Change in Small to Medium Sized Accountancy Practices

PARTICIPANT INFORMATION SHEET

Researcher's Introduction

My name is Angus Ogilvie. I am conducting research in partial fulfilment of a Master of Business Studies degree in Management. The research findings will form part of a Thesis.

My supervisors for this project are Associate-Professor Craig Prichard and Dr Nives Botica-Redmayne of Massey University.

Project Description and Invitation

As an accountant in practice we would like to invite you to take part in our research project on change in small to medium sized accountancy practices. Participation in this project is entirely voluntary.

The purpose of the study is to examine change in small to medium accountancy practices and any new strategies that you may be employing.

As a participant I ask that you read the Participant Information Sheet and Consent Form, and then hand me the signed Consent Form, or email it to me using the email address overleaf.

Project Procedures

I intend to conduct in-person interviews which are likely to take around one hour. The interviews may be recorded (with your permission) for the purposes of accuracy and to help with our analysis. Information gathered in interviews will be treated as confidential. Interviews will be conducted on the understanding that you are responding in a professional capacity.

You may opt to terminate your participation in the project at any point within two months of your interview, at which point any or all information you have given will be destroyed.

All Participant Information Sheets and Consent Forms will be stored in the office of the researcher for a maximum of 6 years. You can request a copy of your audio recording. We will also be making available a summary of findings and/or a copy of the thesis should you wish to receive a copy.

As part of standard research procedure, we will be circulating notes amongst members of the research team. In writing up the research we will use a thematic approach to consider themes observed across collaborations, allowing the responses provided in interviews to remain confidential. All material and data collected will be anonymised.

Outputs of this study could potentially include the publication of academic papers, oral seminars and Massey University internal reports.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any question;
- withdraw from the study at any time;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used;
- ask for the recording to be turned off at any time;
- be given access to a summary of the project findings when it is concluded.

You can contact me, Angus Ogilvie, or my supervisors, Associate Professor Craig Prichard or Dr Nives Botica-Redmayne directly to seek further information about this study or discuss aspects of the research process.

Mr Angus Ogilvie	+64 (09) 222 3830 angus@generateaccounting.co.nz
Assoc-Prof Craig Prichard	+64 (06) 356 9099, extn. 84910 C.Prichard@massey.ac.nz
Dr Nives Botica-Redmayne	+64 (06) 356 9099, extn. 83948 N.Redmayne@massey.ac.nz
Mailing Address:	Te Puna Whakatipu Massey University Private Bag 11-222 Palmerston North 4442

Low Risk Notification

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher named above is responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher or supervisors, please contact:

Dr Craig Johnson Research Ethics Director	+64 (06) 356 9099, extn.85271 C.B.Johnson@massey.ac.nz

Thank you very much for your time and help in making this research possible. It is sincerely appreciated.

Qualitative Interview Questions

Background

1. Tell me a bit about you? How did you come to be an accountant?
2. How would you describe your practice? In your opinion, is it small, medium or large?
3. What type of clients are they? e.g. businesses, trusts, not-for-profit groups, high net worth individuals?

Today

4. What are the main services that you currently derive your revenue from? e.g. bookkeeping, compliance, advisory, tax advice?
5. What services are growing? Why do you think this is?
6. What services are declining? Why do you think this is?

Future

7. How do you think public accountancy is likely to change in the next decade?
8. What changes are likely to impact your practice in the next few years?
9. How will you need to alter your business strategy to remain relevant in the future?
10. Where do you see opportunities to increase the variety of services offered to your clients?
11. Tell me about what you like about technology? What don't you like?
12. In what ways are you experimenting with new technologies?
13. How would you describe yourself and your practice in the area of technology? Are you a fast adopter?
14. How would you describe your business processes? Have you automated any processes?
15. To what extent are you outsourcing any work?
16. How would you describe your skill set? Strong in business, technology, tax etc…?
17. How would you describe your team's skill set? Strong in business, technology, tax etc…?

Gather Demographic Data at Interview

- Gender
- Age
- How would you describe your ethnicity?
- What is your highest qualification?

Appendix Two – Qualitative Survey (Extract from Qualtrics Software)

As an accountant in public practice, we would like to invite you to take part in our research project on change in small to medium sized accountancy practices. Participation in this project is entirely voluntary.

The purpose of the study is to examine change in small to medium accountancy practices and any new strategies that you may be employing.

The survey should take only 5-7 minutes of your time.

Response to the survey is voluntary and all information you do provide will remain strictly confidential.

Individual responses will be known only to the researchers.

Completion and submission of the questionnaire implies consent. You have the right to decline to answer any particular question. Your responses would be more useful if you would take the opportunity to provide comments and explanations that would support your responses, where indicated.

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researchers named below are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher or supervisors, please contact:

Dr Craig Johnson   +64 (06) 356 9099, extn.85271
Research Ethics Director   C.B.Johnson@massey.ac.nz

We do thank you for your time and hope that you will contribute to this important research.

Yours faithfully

Mr Angus Ogilvie   +64 (09) 222-3830
Researcher   angus@generateaccounting.co.nz

Assoc-Prof Craig Prichard   +64 (06) 356 9099, extn. 84910
Supervisor   C.Prichard@massey.ac.nz

Dr Nives Botica-Redmayne   +64 (06) 356 9099, extn. 83948
Supervisor   N.Redmayne@massey.ac.nz

Q1 Thinking about the services your practice currently offers, what percentage of your firm's revenue is associated with each service. (Please note that individual figures must sum to 100).

Auditing : ________ (1)

Bookkeeping : ________ (2)

Business Advisory : ________ (3)

Compliance (annual accounts & tax returns) : ________ (4)

Data Analytics : ________ (5)

Implementing software & training : ________ (6)

Other (please specify) : ________ (7)

Total : ________

Q2 Considering the services you offer, which ones are growing? Only include those ones that you currently offer.

▢ Auditing (1)

▢ Bookkeeping (2)

▢ Business Advisory (3)

▢ Compliance (annual accounts & tax returns) (4)

▢ Data Analytics (5)

▢ Implementing software & training (6)

▢ Other (please specify) (7) ____

▢ ⊗None of my services are growing (8)

Q3 Which services are declining? Only include those ones that your currently offer.

▢ Auditing (1)

▢ Bookkeeping (2)

▢ Business Advisory (3)

▢ Compliance (annual accounts & tax returns) (4)

▢ Data Analytics (5)

▢ Implementing software & training (6)

▢ Other (please specify) (7) ____

▢ ⊗None of my services are declining (8)

Q4 Do you agree or disagree with the following statements concerning technology in your firm?

Strongly Disagree (1) Somewhat Disagree (2) Neither agree nor disagree (3) Somewhat agree (4) Strongly Agree (5)

Technology is going to cause substantial disruption in the profession (10)

Technology will free up my time to provide business advisory services to my clients (1)

Technology will allow me to increase the range of services I can sell to my clients (2)

Automation will impact my duty of due care by removing my direct oversight of applying professional knowledge and skill (3)

Automation of some tasks may mean that accountants may no longer be able to assure stakeholders that they are representing facts accurately and completely in all material respects (4)

Technology will enable me to scale my practice and increase profitability (5)

Technology will strengthen my relationships with clients and increase my relevance (7)

I have concerns around security of information and my duty to keep client data confidential (8)

Technology will have no impact on my firm in the future (9)

Q5 Thinking about potential threats to your firm's profitability in the future, which ones to you perceive as significant?

▢ Availability of qualified and experienced staff (1)

▢ Changes to professional standards (2)

▢ Commoditisation of compliance driving down fees (3)

▢ Team members no longer having relevant skills (4)

▢ Regulatory & legislative change (5)

▢ Software using artificial intelligence and machine learning (6)

▢ Other (please specify) (7) ____

▢ ⊗I don't perceive any threats to my firm's future revenue (8)

Q6 Thinking about potential opportunities to increase your firm's profitability in the future, which ones to you perceive as significant?

▢ I can grow my advisory work with clients (1)

▢ I will be able to devote time to analysing client data (7)

▢ I can implement software and train clients on its use (6)

▢ I can reduce overheads by reducing the number of team members (2)

▢ I can outsource more of my work (3)

▢ I can increase the amount of compliance work (4)

▢ I can offer new services (please specify) (5)

Q7 How likely are you to seek specialists in the following areas, either as full-time staff members, contractors or service providers?

Very unlikely (1) Somewhat likely (2) Neither likely nor unlikely (3) Somewhat likely (4) Very likely (5)

Auditing (1)

Bookkeeping (2)

Business Advisory (3)

Compliance (annual accounts & tax returns) (4)

Data Analytics (5)

Implementing software & training clients (6)

Tax advice (7)

Other (please specify) (8)

Q8 What is your gender?

o Male (1)

o Female (2)

o Prefer not to answer (3)

Q9 What is your age?

o 25 to 34 years (1)

o 35 to 44 years (2)

o 45 to 54 years (3)

o 55 to 64 years (4)

o 65 to 74 years (5)

o 75 to 84 years (6)

o Prefer not to answer (7)

Q10 Choose one or more ethnicities that you consider yourself to be:

o New Zealand European/Pakeha (1)

o Other European (2)

o Maori (3)

o Pasifika (4)

o Asian (5)

o Middle Eastern (6)

o Other (7) ____

o Prefer not to answer (8)

Q11 What is the highest level of school you have completed or the highest degree you have received?

o High school graduate (1)

o Undergraduate Diploma (2)

o Bachelor's degree (3)

o Post-Graduate Diploma (5)

o Master's degree (4)

o Doctorate (6)

Q12 Which professional body or bodies do you belong to?

▢ Accountants and Tax Agents Institute of New Zealand (ATAINZ) (1)

▢ Certified Practising Accountants Australia (CPA Australia) (2)

▢ Chartered Accountants Australia & New Zealand (CAANZ) (3)

▢ Other (4) ____

Q13 What position do you hold in the practice?

o Managing Partner or Director (1)

o Senior Manager (2)

o Practice Manager (3)

o Other (please specify) (4) ____

End of Block: Default Question Block