# Digital adoption by small law firms in South Africa: Challenges and opportunities


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**A research proposal submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business**

**Johannesburg, 24 July 2022**

## KEYWORDS

Digital transformation, digital disruption, innovation, new technologies, technological adoption, digital adoption, small law firms, legal firms, attorneys, lawyers, business models, South Africa.

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AI - Artificial Intelligence

DT- Digital transformation

DM- Digital maturity

4IR- Fourth Industrial revolution

LPA- Legal Practice Act

ML- Machine Learning

ROI- Return on investment

SA- South Africa

SC- Smart Contracts

SLF- Small law firms

STLF- Small traditional law firms

TLF- Traditional Law Firms

TA- Technological adoption

# CHAPTER 1. INTRODUCTION

## 1.1 Purpose of the study

This qualitative study will explore the factors limiting further technological adoption (TA) by small law firms (SLF) in South Africa (SA) and identify which digital transformation (DT) principles can be deployed to surpass constraints, enabling such firms to modernize their business models for higher efficiency and effectiveness.

## 1.2 Background to the study

There are considerable variations in the estimated impact of new technologies in the context of legal service provision according to the literature. For instance, Armour and Sako (2020) explore what may happen to law firms and the legal profession when the use of Machine Learning (ML) based Artificial Intelligence (AI) becomes prevalent in legal services, using three levels of analysis: tasks, business models, and companies. After this subdivision, Armour and Sako (2020) derived the following general conclusions regarding each of these levels.

**Tasks:** AI is now able to assist law firms by automating routine and non-routine tasks involving large amounts of data analysis and basic interpretation that are currently primarily done by paralegals and junior lawyers. However, at present these tools have limitations when it comes to activities that involve creative and social intelligence. There are also restraining factors for its implementation in the legal context. This increases the likelihood that, in the future, legal practitioners will work alongside AI and ML, rather than be completely replaced by AI/ML.

**Business models:** The use of ML and AI technologies enables the emergence of new types of business models: (1) legal operations, (2) legal technology, and (3) consultancy. Expanding the possibilities of providing services to one's clients beyond the traditional legal advisory business model as summarized in Table 1. Although not yet clear how the different business models will coexist in the legal

market, this study concludes that it will likely change the dynamics of the market, forcing traditional law firms (TLF) to adapt.

**Table 1: Traditional and AI-enabled business models in legal services**

| Business Model | Category (business model) | What is sold? (Customer value) | Pricing (Value creation method) | How is value captured? |
|---|---|---|---|---|
| Legal Advisory | Traditional | Bespoke legal advice. | Input-based (billable hour) | Trust, reputation, and leverage. |
| Legal operations | AI-enabled | Process efficiency and project management. | Output-based (fixed fee) | Process and product management capabilities. |
| Legal technology | AI-enabled | Technological solutions. | Subscription, licensing. | Intellectual property (copyrights/ patent) and platforms. |
| Consulting | AI-enabled | Consulting advises. | Input-based (charged by the hour) | Consulting expertise grounded in legal operations and/or legal technology. |

**Source: Armour and Sako (2020, p. 34)**

**Organisation:** From this perspective, Armour and Sako (2020) focus on understanding how the structure of law firms and their complements are arranged. The authors reported that traditional law firms are usually comprised of pure human capital in a lawyer-centric approach and are organized based on partnerships which are not ideal for the new business models enabled by AI. Since these models usually require a more business-oriented structure, with the capacity to manage multidisciplinary teams and attract external investments.

Moreover, regarding the disruptive changes in the market for legal services, Corrales et al. (2019) mention how legal start-ups, the use of blockchain-enabled smart contracts, and legal design could also influence the legal scenario and catalyse the emergence of new business models such as platform-based service provision.

There is, however, a natural gap between the scenarios projected by specialists and the actual concretion (Simpson, 2016). This gap will become clearer once the TA for the individuals and business gathers enough momentum to solidify the changes in customer needs in terms of legal service provision, and their openness to adopt new business models based on emergent technologies as exemplified by Armour and Sako (2020). Preferences which might show significant variations from person to person as seen in other scenarios evolving the study of individuals' behaviour, and factors that might influence it during technological adoption (Davis, 1987; Janeček et al., 2021; Rogers, 2010; Straub, 2009).

Further, considering: (1) the pervasive way in which technological disruption affects business in the context of the fourth industrial revolution (4IR) (Armstrong & Lee, 2021), and (2) the emergent and still ongoing effects derived from the COVID-19 pandemic (Donthu & Gustafsson, 2020; Faraj et al., 2021), if small traditional law firms (STLF) wait for the concretization of these tendencies before modernizing its service provision, it may be difficult to catch up with the early adopters. On this note, surveys and reports point out that a great deal of the law firms in SA (Eventful, 2020; LSSA, 2021), Africa (Afriwise, 2020), and in other parts of the world (American Bar Association, 2019; Kluwer, 2019), are comprehending the importance of adopting new technologies. Despite this, they are still in the planning stages of increasing their TA (Kluwer, 2019), and/or are struggling to make the best use of these technological tools that they possess. Some of these companies also maintain reservations regarding TA.

A recent survey of LSSA (2021), conducted mostly with legal practitioners from SLF confirmed that only 27% of them adopted new technologies. While 43% of them pointed out that their companies don’t have the intention to invest in new technologies in the short term. The LSSA (2021) research also showed that the

SLF are even more resistant to making considerable changes in their business structure. 38% of the participants pointed out that their companies don't have the intention of changing the structure of their organisation and 15% would consider doing it only in the long-term future.

Unfortunately, the ability of firms to quickly transform their business models for them to monetize the opportunities brought by new technologies could be a key difference between being disrupted or thriving in the current socio-economic environment.

Studies show that TLF are resisting changes when it comes to adopting new technologies (Schoonmaker IV, 2017; Simpson, 2016). The reasons behind this phenomenon, both globally, and specifically in the context of South Africa will be further investigated in the next chapters. However, this adaptation process is a necessity that is been pointed out by the literature as beneficial for their **business's continuity** (Armour & Sako, 2020; Gravett, 2020; Tung, 2019). Therefore, partners, owners, and managers of SLF must understand these market dynamics derived from the ever-growing adoption of new technologies in the legal field, and actively pursue to overcome the challenges inherent in DT journeys.

## 1.3 Research problem

The literature points out that the majority of SLF around the globe experienced little to no change in their business models, despite the increase in the availability of new technologies.

New arrivals and early adopters are effectively deploying them, thereby innovating within this market and creating new business models more aligned with clients' demands. Therefore, SLF need to respond quickly to these pressures to remain relevant. However, this creates a problem since these firms usually lack the relevant skills to adopt the new technologies to achieve this. This serves as the main research problem of this study.

To assist the SLF, this qualitative study aims to explore if the SA legal market follows this global trend, and what the main barriers are inhibiting these companies from adopting new technologies for DT in their businesses.

Based on the findings, the study will conclude by suggesting business management principles and frameworks that could be useful to overcome these barriers, enabling them to add value for customers.

## 1.4 Research questions

1. What value can be derived from the effective adoption of technology in the legal environment?
2. What are the main constraints for TA and the modernization of the business models of SLF in SA?
3. Which business management principles can be deployed to surpass constraints, and increase the adoption of new technologies in the legal environment?
4. What are the limitations or adaptations necessary when using these management principles considering this industry and the context of SA?

These are the questions explored in this study.

## 1.5 Significance of the study

The effects of new technologies of the 4IR on the legal sector are not a new topic. However, this study aims to contribute to the field of knowledge from another, less explored perspective (Schoonmaker IV, 2017), by seeking to investigate how SLF can adapt their business models and value creation in the context of the current social-economic environment.

A significant part of the literature points to the relevance of this topic (Gravett, 2020; Kluttz & Mulligan, 2019), indicating that the manner in which legal services are being provided tends to change by the possibilities opened with the application of new technologies. In this context, small traditional law firms (STLF),

will be one of the most susceptible to the negative impacts of these new dynamics if they don't respond soon. (Armour & Sako, 2020, 2021; Corrales et al., 2019; Gravett, 2020; Kluttz & Mulligan, 2019; Wang et al., 2019)

From an empirical point of view, this study will be relevant to partners, owners, and managers of STLF, that have extensive experience and theoretical background in their legal fields, but usually have more limited knowledge relating to subjects such as (1) business management, (2) leadership, (3) entrepreneurship and (4) digital literacy.

The present study also aims to contribute to the academic debate, by researching DT and TA in law firms located in developing and unequal countries. Exploring management frameworks taking into consideration the challenging context of South Africa.

## 1.6 Delimitations of the study

This study will deploy the primary research method of interviews conducted with legal practitioners of SLF located in SA to investigate the questions proposed in Section 1.4.

Due to the limitations imposed by the government health protocols to contain the local spread of COVID-19, the interviews will be made via remote communication channels. This unique scenario is one of the delimitations of the study, negatively impacting the sample size, and its capacity to be representative of the general population.

Furthermore, to provide a more practical approach to the problem, this study will be limited to exploring the following factors regarding SLF within the South African legal context:

a. Laws and regulations: applied to the South African legal sector.
b. Demographic and socio-economic statistics: regarding SLF.
c. Impact of COVID-19.

## 1.7 Definition of terms

For a better understanding of this study the following terms are defined in the context of this research:

### 1.7.1 *Business model*

This study will follow the definition presented by DaSilva and Trkman (2014, p. 383) as exposed below:

*"In a nutshell, the way companies operate in the 21st century is open to an unprecedented range of possibilities. The term "business model" has accompanied this evolution and gradually found its place in the academic literature. By studying the roots of the terms and building upon the RBV and the TCE, we argue the core of a business model is defined as a combination of resources which through transactions generate value for the company and its customers"*.

It is important to highlight that the business model could also include groups of companies and stakeholders, as put forward by Armour and Sako (2020, p. 32), referencing Zott and Amit (2009):

*"A business model may be a particular firm's approach, or it may encompass the combined logic of value creation for the firms and its other stakeholders working together in networks or clusters."*

### 1.7.2 *Traditional law firms (TLF)*

The expression "traditional law firms" will refer to the concept of a "law firm's traditional legal advisory business model" as conceptualized by Armour and Sako (2020) as a business model where customers' needs are met by lawyers providing customized legal advice or services related to a specific legal problem of their clients. In this business model, lawyers are seen as "trusted advisors"(Armour & Sako, 2020), and the value creation to obtain revenue is usually via charge per hour, or service, using an input-based approach to determine the price.

### 1.7.3 *Small law firms (SLF)*

This study considers small law firms that employ between 2 (two) to 20 (twenty) legal professionals.

This range was selected according to the LSSA (2021). From the total sample of 1,210 participants of this study, from various provinces of SA, 83% of them responded that they integrate law firms with up to 20 employees. (LSSA, 2021, p. 13). Moreover, the latest statistics of the legal profession by the Law Society of South Africa (LSSA) made in 2019 showed that 92,3% of the total registered law firms in this institution had 19 attorneys or fewer (Law Society of South Africa, 2019).

### 1.7.4 *Digital transformation (DT)*

There are many definitions of digital transformation in the literature, however, this study will adopt the definition of Armstrong and Lee (2021, p. 514), as:

*"the total of all organisational change efforts in response to technological disruption, that results in a market change in the form and nature of the organisation, especially so that the organisation's ability to thrive in the digital age is improved."*

### 1.7.5 *Digital maturity (DM):*

Regarding the concept of digital maturity, we could draw a parallel with the idea of customer satisfaction, as both are dynamic and relative concepts.

The customer needs vary depending on many circumstances and/or events, demanding the companies a constant process of improving, learning, and adapting to these new demands. In this sense, the same can be said about the concept of digital maturity. Considering this characteristic, this study will adopt the definition of digital maturity by Armstrong and Lee (2021, p. 544), which adapted the concepts of Remane, Hanelt, Nickerson, et al. (2017) and Thordsen et al. (2020):

*"Digital Maturity is a measure of an organisation's ability to achieve desired strategy and operational organisational outcomes in the presence of and embracing, profound technological change. It is a measure of where an organisation is on its digital transformation journey"*

The relationship between DT, DM, and the following concept of TA will be further explored in Chapter 2.

### 1.7.6 *Technological adoption (TA)*

The term "technological adoption" for this study will be used to reference two different meanings, depending on the perspective.

The first is the personal perspective, which discusses the decision of whether an individual will or will not adopt a particular technology and the time frame that he or she takes to do so (Rogers, 1995, 2010; Straub, 2009).

The second one will be from a business company perspective, in a reference to the technologies applied by the firm to create, support, and improve internal operations, business models, services and products offered to the market.

Regarding the latter perspective, it is relevant to mention that the literature commonly uses methods that consider and measure the technological adoption levels of companies, grouping them for later comparing the results (Fitzgerald et al., 2014; Reuters, 2020; Westerman et al., 2012).

## 1.8 Assumptions

Due to the current necessity that the primary research methods are held through remote communication channels, as imposed by health protocols to contain the spread of COVID-19 in South Africa, this study assumes that:

a. Participants have the necessary technological knowledge, skills, and resources to participate in interviews for the study.
b. The responses are made exclusively by the interviewed participant, without the influence of the interaction of any other parties.

c. The responses reflect their beliefs and therefore the sample is representative of the overall studied population.

This study further assumes that digital transformation principles and technology, when deployed correctly, can be used by any company to modernize its business models, creating more value for its stakeholders.

## 1.9 Chapter Outline

After this introduction (chapter 1) of the theme and proposal, the structure of the dissertation is as follows:

Chapter 2 focuses on a literature review on TA, highlighting its relationship with the concepts of DM and DT and the relevance of these concepts for companies regardless of their sector. This chapter also briefly exploits the context of the SA legal sector and factors commonly preventing an increase in the levels of technological adoption as indicated by the literature.

Chapter 3 encompass the research methodology used to further investigate and analyse what barriers are blocking a more extensive technological adoption by traditional small law firms in South Africa.

Chapter 4 exposes and summarizes the results of this investigation, sectioned by the emergent themes from the answer of the volunteers interviewed.

Chapter 5 contrasts the interview findings against the propositions of Chapter 2 by aiming to find their level of correlation with the reality of the South African law firms under analysis. Possible relationships with the theoretical framework are also explored if existent.

Finally, Chapter 6, presents the conclusions according to the research questions including practical suggestions of general steps and frameworks that may assist small law firms to surpass the inhibitors of technological adoption and digital transformation found in the study.

Possible limitations and gaps for future research conclude this chapter.

# CHAPTER 2. LITERATURE REVIEW

## 2.1 Introduction

This literature review aims to demonstrate the relevance of the TA and the importance of strategically increasing levels of technological deployment for businesses to remain competitive in the market and generate value.

In this chapter, the study will also investigate the context of the SA legal sector and what factors are commonly pointed to by the literature which inhibit companies, and law firms, from adopting and adapting their business models with the strategic use of these new technologies.

To address these points, the literature review includes the following:

1. Relevance of technological adoption and related concepts: including the relationship of TA with the concepts of DT and DM.
2. Generating value with TA: Effects of combined application of DT and DM on business results and performance.
3. Technological adoption in the legal sector- The state of the art and primary inhibitors from:
    a. A global perspective.
    b. The SA legal sector: including a brief explosion of the context and overview of this industry in terms of its technological adoption.
4. Conclusion of the Literature Review.
5. Analytical framework.
6. Conceptual framework.

## 2.2 Relevance of Technological Adoption (TA) and related concepts

### 2.2.1 *Relationship of TA with the concepts of DT and DM*

Technology adoption, digital maturity, and digital transformation, as defined in Section 1.7, are often seen in the literature in conjunction. For this reason, it is necessary to clarify the relationship between these concepts since this can significatively impact the business results of the firms that are pursuing to increase their levels of technology adoption.

The literature varies quite significantly when it comes to how, and which elements should be taken into consideration when measuring the levels of digital maturity of one business (Remane, Hanelt, Wiesboeck, et al., 2017; Teichert, 2019).

However, it is sufficient to highlight that DM is always a tool that has the purpose of providing a mechanism to access and benchmark companies based on which technologies they utilize and how well these are deployed and grounded in specific parameters. At this stage, it is common to consider aspects such as ROI after the TA and/or metrics related to the overall business results (Ifenthaler & Egloffstein, 2020; Williams et al., 2019).

Therefore, the frameworks of DM encompass the level of TA of one company, as can be seen, for example, in the definition of DM of Westerman et al. (2012, p. 3), below:

*"Digital maturity is a combination of two separate but related dimensions (…). The first,* ***digital intensity,*** *is an investment in technology-enable initiatives to change how the company operates (…)"*

This study will make use of a slightly different approach regarding the concept of digital maturity, adopting a simplified version that considers only the technology adoption and the organisational architecture. This method is comprised of three stages as described below.

**Phase 1- Digitization (beginner phase):** The concept of digitization relates to the translation of something that was originally physical or analogue into digital form (Armstrong & Lee, 2021, p. 24). In the first phase of the digital transformation, companies usually only transition their files and documents from physical to digital format with minimal changes to their structure or internal process.

**Phase 2 - Digitalization (intermediate phase):**

*"refers notably to the bigger set of all transformations and changes to make that digitization process work" (*Armstrong & Lee, 2021, p. 24*).*

During the digitalization phase, companies go beyond digitization, introducing changes in their internal processes, and optimizing them with the deployment of new technologies. Examples include the use of AI and machine learning to support the staff in their daily activities and the automation of repetitive tasks.

**Phase 3- Digital Transformed (advanced phase):** Digitally transformed businesses fully exploit the possibilities of using new technologies, completely revising their internal processes and the way their products and services are provided for clients/users. Examples of companies that have advanced levels in their digital transformation journey include Uber, Amazon, and Airbnb.

This choice was made to make it possible for the SLF participating in the research to easily self-evaluate their current levels of DM, and assess their understanding ofthis topic.

Nonetheless, for future research, examiners should make use of a broader number of parameters with multiple categories, based on numerical scales to obtain a richer notion of the firm's digital maturity. Regarding the relationship between DM and DT, this is well described by Armstrong and Lee (2021, p. 540):

*"(…) digital maturity can be considered to be a 'snapshot' of how digitized an organisation has become at a point in time on its journey of digital transformation."*

Finally, Figure 1 of this research summarises the discussion above, showing the relationship between these three concepts according to the DM model adopted by this study.

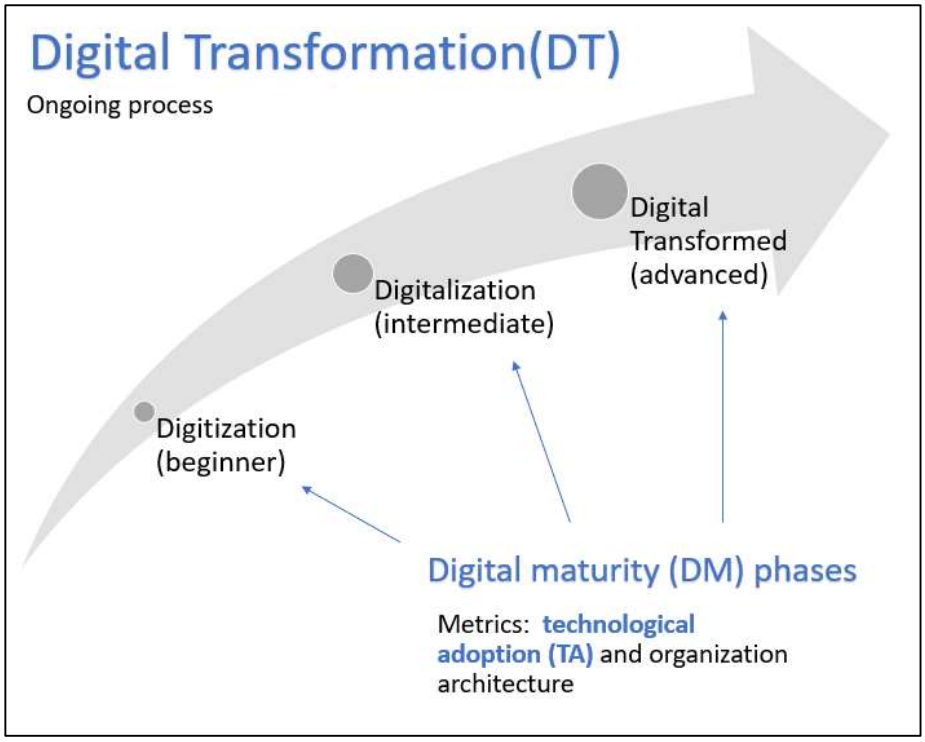


**Figure 1: Relationship between DT, DM, and TA**

## 2.3 Generating value with TA: Effects of combined application of DT and DM on business results and performance

Companies that intend to modernize their structures to implement technology adoption must usually invest a lot of time and resources to increase their levels of digital maturity (Kane et al., 2017). Moreover, in the digital era, it is necessary to apply constant effort involving the leadership and all parts of the organisation and strategic planning to build and sustain the correct internal culture to enable innovation and agility to be applied to the business models of one company (Mukherjee, 2020; Schein, 2019), including the ones that operate in the legal environment (Michalakopoulou et al., 2021).

Considering this, understanding why companies need to embark on a digital transformation journey is essential to keep the necessary momentum to promote this change. The following studies demonstrate the potential of strategic application of TA relating them to tangible business results. For example,

Westerman et al. (2012) created a classification of digital maturity for companies encompassing two dimensions: (1) digital intensity, and (2) transformation management intensity. In this context, digital intensity comprises the total of investments in technology-enabled initiatives made by one company to change how it operates. The investments may point toward several areas of the corporation such as customer engagement, internal operations, and business models.

While transformation management intensity comprises:

*"the vision to shape a new future, governance, and engagement to steer the course, and IT/business relationship to implement technology-based change."(*Westerman et al., 2012, p. 3*)*

For two years, Westerman et al. (2012), analysed both dimensions of more than 400 large and traditional corporations in many industries dividing them into four types according to their DM levels: (1) beginners, (2) conservatives, (3) fashionistas, and (4) digirati.

To better illustrate these types the authors constructed Figure 2.

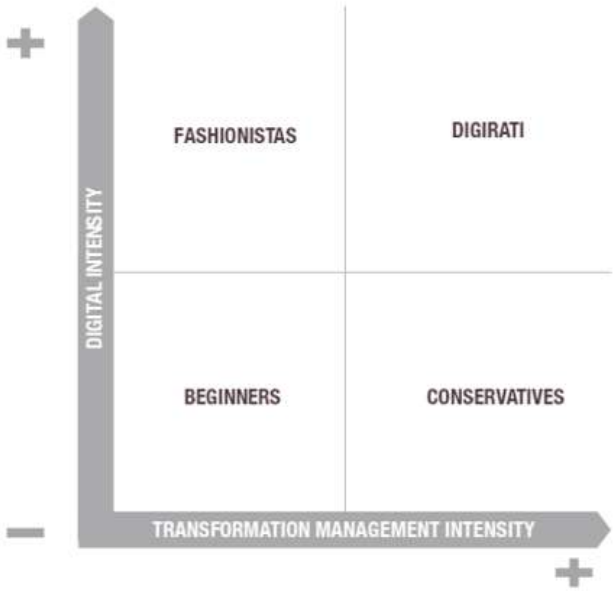


**Figure 2: Four types of digital maturity**

**Source: Adapted from Westerman et al. (2012, p. 4)**

After classifying  Westerman et al. (2012) contrasted the business performance results of the groups of companies according to their type. The business performance measurement of each company considered the following criteria and metrics:

a) Profitability: based on the metrics of (a) EBIT margin, and net profit margin
b) Market valuation: based on the metrics of Tobin's Q Ratio, and price/book ratio
c) Revenue generation: revenue/employee, and fixed assets turnover.

Overall, the results detected that digirati companies, ie, the ones with the best DM levels, outperformed their peers in every metric analysed. The Digirati group generated 13% more revenue, had a 19% higher market valuation, and 50% higher profits when compared with the beginner's group.

The Fashionistas group, comprised of companies that work toward increasing their levels of TA but in an unstructured way, was also compared with the Digirati group. The results showed how the level of knowledge and strategic application of technologies can influence the return on investments (ROI), performance, and business results. When it comes to market valuations and profitability, the Digirati performance surpassed the Fashionistas by 24% and 37%, respectively.

However, most importantly, the findings of Westerman et al. (2012) are not an isolated event. Superior business performance of the companies that have higher levels of technological adoption combined with an adequate digital transformation process and strategy is also noted in more recent studies conducted by the MIT Management Institute (Fitzgerald et al., 2014), and by other authors (Henderson et al., 2018).

For example, in a study made by Grebe et al. (2018), 1,900 companies from various industries located in Europe and the USA showed that companies with a higher level of DM and greater investments in digital adoption, saw increases in their competitive advantage, cost efficiency and time to market,  comparing to those with less investment into digital capacities.

Finally, more recently, the work of Kiradoo (2021) also emphasises the importance of technology adoption from the internal organisation perspective. This work analysed the role of digital technology and digital transformation in improving the effectiveness of business management and operations, concluding that:

*"Technology is available in various forms and can be used by businesses to manage growth and success. It has been observed that technology provides an enormous benefit to the company in terms of operations, productivity, and profitability" (*Kiradoo, 2021*)*

Therefore, it is key for companies, regardless of their sector, to strategically invest in the deployment of new technologies and embark on DT journeys to innovate and improve their overall business activities. Otherwise, the sustainability of their business may be compromised by the competitors who opt to embrace the possibilities opened by the TA.

### 2.3.1 *Proposition 1:*

Strategic TA can increase the value of products and services in the legal environment showing significant increases in business results. Legal providers that effectively deploy technology are outperforming the TLF including metrics such as (1) efficiency, (2) competitive advantage, (3) profitability, and (4) market value.

### 2.3.2 *Proposition 2:*

For law firms to extract the maximum value that can be created for their businesses it is not enough for TLF to merely apply the new technologies to their current business models. The TA must be done in conjunction with the business management principles of DT to increase their levels of DM.

## 2.4 Technological adoption in the legal sector: The state of the art and primary inhibitors

### 2.4.1 *A global perspective*

*"(…) the law has historically lagged behind other businesses and professions when it comes to adopting new technology. This relative sluggishness has opened up opportunities for other players to enter the legal market- competitors that legal professionals never had to worry about before." Reuters (2020, p. 3)*

Indeed, the statement made by Reuters (2020) in their recent legal market report summarizes the stagnation legal profession that was already reported in the literature over the last years.

The slow adaptation process of the legal profession with respect to TA and DT is due to many factors, such as (1) lack of digital literacy, (2) reservation regarding data security, (3) old structures that inhibit innovation, and (4) reactive culture (Brooks et al., 2020). Underpinning all of these, and perhaps the primary reason remains resistance to change by the legal sector (Brooks et al., 2020).

Simpson (2016) demonstrated that the advance in technologies exacerbated tensions between societal interests and conservative lawyers. Society demands faster, efficient, and more affordable legal services (Reuters, 2020); while conservative lawyers are interested in maintaining the status quo of the profession to justify their currently (costly) bill-per-hour business model. (Simpson, 2016).

Therefore, the lack of interest by law firms, catalysed by an educational system model that perpetuates this conservative cycle, fails to provide the corresponding skills necessary for technological enhancement in legal services (Janeček et al., 2021) and may explain how the legal profession managed to shield itself from a more profound technological adoption (Gravett, 2020).

A study from American Bar Association (2019) investigated small law firms that invested in new technologies. While they adopted software to improve document and processes management, they effectively only deployed a fraction of the

potential of these tools in their daily activities, especially when considering securing their electronic communications, and transactions.

Despite the slow pace of innovation in the legal sector, society's need for the modernization of legal service provisions created a gap in demand that is being exploited by new entrants. These include Legal start-ups (Armour & Sako, 2021; Praduroux et al., 2016) and the Big Four global accounting firms (Wilkins & Ferrer, 2018) that are pushing TLF to the edge of being disrupted (Brooks et al., 2020; Gravett, 2020; Simpson, 2016), as they get closer to experiencing the inevitable collapse of their current business models.

Therefore, STLF need to respond quickly by embracing the opportunities opened by the strategic use of new technologies, such as AI (Armour & Sako, 2020) to respond to these pressures to secure their position within the legal market and produce value for their clients.

### 2.4.2 *Proposition 3*

The traditional law sector is lagging when it comes to technological adoption mainly due to a lack of knowledge and resistance to change. This is creating the opportunity for the earlier adopters and new entrances to disrupt the market.

### 2.4.3 *The South Africa Legal Sector*

#### a. *Context and overview*

Klaaren (2020) analysed the general characteristics of the legal profession in SA over the last 30 years. He concluded that unfortunately from the 1980s, during apartheid times, and until recently, not much has changed despite many efforts that took place aiming to minimize this legacy.

The author emphasized that in the mid-1980s groups comprising of Indian Coloured and black Africans constituted only 10% of the total number of attorneys and 7% of the advocates according to the General Council of the Bar.

Until 2020, these numbers have not changed much (Klaaren, 2020) and therefore are far from the general demographics of the population which showed a very different split in terms of racial composition.

In mid-2019, Statistics South Africa (South African Government, 2019) estimated that South Africa had a population of 58,78 million people, with women making up 51,2%.

In terms of ethnic groups, the same study showed that the black African population comprised most of the population, constituting approximately 81% of the total. Mix race and Caucasians comprised 5,2 and 4,7 million respectively, the minority of the population being Indian and Asian with a population of 1,5 million.

In terms of gender, Klaaren (2020) also pointed to his previous study (Klaaren, 2014) in that gender discrimination against women in the profession constitutes a problem.

The details about the origin and the reasons behind the racial and gender composition of legal professionals in South Africa are beyond the scope of this study. However, it is a part of the South-African legal context and so cannot be ignored.

Fortunately, considering the most recent numbers relating to candidate attorneys, some positive prospects are emerging. In 2017 black Africans were nearly two-thirds of the candidate attorneys with women making up the majority comprising 57%. (Klaaren, 2020).

The inequality permeating the legal scenario could also be seen from the organisation's perspective. In the past few decades, the emergence of a large corporate law firm sector divided the profession with few medium and large companies on one side (Klaaren, 2015). The remaining 40% of attorneys were solo practitioners with a considerable percentage of small legal firms having largely black staff. (Klaaren, 2020).

### b. *Regulations*

The legal profession of South Africa is now regulated by the Legal Practice Council, a body established by the Legal Practice Act (LPA) in 2014 and later modified by The Legal Practice Amendment Act 16 of 2017 (Bonnin, 2019).

The initial draft of the LPA 2014 regulation was made in 2009 with the Legal Practice Bill, created by the Department of Justice and Constitutional Development. The intention behind it was to unify the fragmented legal profession while also aiming for it to be more representative of South African society to lower the barriers to entry and costs regarding legal services that presented an impediment to access to justice for a large part of the population (Bonnin, 2019).

Therefore, the main points of the Legal practice Bill included (1) the recognition and regulation of the practice of paralegals (Dereymaeker, 2016),(2) the creation of an Office of Legal Service Ombud, (3) and the abolition of the distinction between advocates and attorneys, creating a single class regulated under the newly established government entity named “The South African Legal practice council”. (Klaaren, 2020).

The changes were not well received by the entities that define the rules of the profession at the time, such as Law Societies and Bar Councils, which claimed to be in the best interest of the society that the legal profession remained self-regulated. (Bonnin, 2019)

As a result of these tensions, the first draft was modified, and most of the controversial topics were excluded from the approved LPA 2014.

The excluded sections included the regulation of paralegal’s activities. Also, the current Legal Practice Council is almost exclusively composed of legal practitioners, a victory for those who wanted to continue with a self-regulated model of the legal profession. (Bonnin, 2019)

### c. *Technological Adoption and Business Structure*

Only a small number of publications currently address TA within the private legal sector and even fewer address the South African private legal sector (Bopape,

2010; Naicker, 2017). Du Plessis examined this topic in two studies looking at the optimisation of information and knowledge management within SA law firms. In his first study the author demonstrated that, although in general, law firms positioned themselves as open to new possibilities, aspects such as (1) lack of awareness and (2) knowledge could be acting as a hindrance to a more robust application of technologies for these tasks (Du Toit, 2005, p. 7):

"*Among the most notable findings of the survey was that participants, in general, indicated their use of IT applications and KM systems for managing information and knowledge in their organizations. However, the relatively high percentages of lawyers responding as 'being unsure' might indicate a lack of knowledge or awareness concerning these systems, or it could be an indication that these systems are currently not used in South African law firms. Results further showed that Internet and intranet use was high and that the uses for these technologies were valued, but the concept of an extranet proved to be mostly unfamiliar. (…)"*

While his second paper confirmed the conservatory position of law firms regarding the application of new technologies within their businesses. (du Plessis, 2011).

In 2016, the Law of Society of South Africa in collaboration with the company Lexis Nexis published a report detailing how South Africa's law firms were facing new challenges in the legal profession (LSSA, 2016). The project involved a survey consisting of more than 700 law firms, attorneys, and solo practitioners in various legal fields revealing important trends.

Regarding investments in technology, only 32% of the companies said that they had already invested in the implementation of technology, while 30% affirmed that have the intention to do so within 1 to 2 years (LSSA, 2016).

Regarding business growth, 70% and 64% of the participants rated the (1) development of online services and (2) social media presence, respectively, as "very important" or "important". 92% of the participants recognized the implementation of technology as "very important" or "important" for the future growth of their firms (LSSA, 2016).

Naicker (2017) also discussed these features, when investigating the primary factors influencing the adoption of online legal services by law firms in South

Africa. The author showed in his study that the provision of online legal services was compatible with the law firms and benefited customers.

At the same time, Naicker (2017) demonstrated that law firms may not be ready to adopt the radical changes necessary to make this a reality which places them in a precarious position, in terms of their competitive advantage and the maintenance of their activities. Regarding the management of law firms, the author concluded:

*"(…) top management of law firms are operating with the sense of ignorance, underestimating the looming threat of online legal services, dismissing them as low quality. As virtual firms continue to grow size and influence over the market, (…)" page 80 (Naicker, 2017).*

Recently surveys organized by private companies (Afriwise, 2020; Eventful, 2020) began to study the effects of Covid-19 on the legal sector of countries located in Africa, including South Africa (LSSA, 2021).

Unfortunately, the results demonstrated that much remains the same with some signs that law firms and the legal sector are raising their awareness in terms of the importance of technological adoption but are not yet actively implementing these. The Eventful (2020) survey results pointed out that the response of law firms is still surprisingly slow due to the effects of Covid-19, considering that 45,7% of the participants admitted that they believe they still have a long way to go in terms of embracing technology.

Moreover, the Afriwise (2020) report highlighted clear evidence showing the resistance to change and a reactive culture embedded in the private legal market since:

- 61,2% of companies reported that will not look for alternative service delivery models in the short term.
- 44,9%, gave answers ranging from "somewhat disagree" to "no" when asked if they were taking steps to technologize their operations before the COVID-19 pandemic (Afriwise, 2020).

While the latest edition of the study conducted by the Law of Society of South Africa in collaboration with the company Lexis Nexis (LSSA, 2021), contrasted

the findings of this survey, with the results from their previous editions revealing that in the last 14 years:

- Regarding business architecture: *"30% of the sample have changed and 17% maintain that it is planned in the short term. For most, however, is not on the radar. (*LSSA, 2021, p. 28*)*
- Regarding TA: *"A notable dip in the propensity to invest in processes and technology since 2008. Likewise, a steady increase in firms who intend to on-board new tech." (*LSSA, 2021, p. 30*)*

In conclusion, it is important to consider that the output of the last three mentioned reports in the context of South African SLF is yet to be confirmed. In the studies of Afriwise (2020) and Eventful (2020), the population analysed was relatively small and the data was gathered from different countries, which may not necessarily reflect the same reality of South Africa.

Also, the study of LSSA (2021) and the reports of Afriwise (2020) and Eventful (2020) were comprised only of multiple-choice questions with single responses. This form of questioning makes it difficult to ascertain the underlying trends of the SA market.

In addition, the use of terminologies regarding TA and business management was assumed to be understood by the participants was another aspect to be considered, since as seen above, a lack of knowledge could be an important barrier to technological adoption in the South African legal market.

These are the questions that this study aims to further investigate over the next chapters.

### 2.4.4 *Proposition 4*

Despite having a unique background, the literature so far shows that the legal sector of South Africa has similar trends as seen globally regarding TA and its business structure. Although further investigation needs to be done on this topic.

## 2.5 Conclusion of Literature Review

Considering the research problem being investigated, the literature reviewed in this chapter concluded that technological adoption can be used to modernize the business models of traditional law firms, creating greater value for their clients and other stakeholders. However, to achieve these results and to obtain the maximum ROI on new technologies, the studies also pointed out that is not enough to merely deploy them over the traditional organisation. The adoption must be made strategically and in combination with the digital transformation process of their business.

The literature indicated that, although the TLF and SLF recognize the importance of increasing their levels of TA and modernizing their business model, a considerable number of firms remain in the planning stages. While other companies do so based on a pure reaction to market changes. Furthermore, most firms apply only a fraction of the technology potential thereby only making small advances over their traditional business models.

This leaves a gap between society, the client's needs, and the traditional law firms creating a demand opportunity that is being exploited by the early adopters in the legal sector and new entrants to the market. These new players can then disrupt the market of traditional law firms.

Lack of knowledge is one of the main reasons pointed out by researchers underpinning the low levels of technological adoption by the TLF globally which may be a leading cause of a lack of skills and resistance to change.

The literature review also indicates that the majority of SLF in South Africa utilize a traditional business model and that their technological adoption is following the same patterns as seen in other parts of the world, despite the inherent local context and structure regarding this sector.

Therefore, due to the (1) limited number of studies regarding small traditional law firms in the context of South Africa, (2) the small database analysed in each of the studies, and (3) the ongoing impacts of the Covid-19 pandemic on the industry, this study aims to further investigate how representative these previous

studies are in the South African legal context as given in propositions 1 to 4 above.

After the analysis, the research aims to use the conclusions to assess which digital transformation and digital maturity tools and principles could better assist small traditional law firms to modernize their business models and maximize the ROI in new technologies.

The structure of this investigation will be conducted based on the research questions and propositions extracted from the literature reviewed as indicated in Table 2.

**Table 2: Consistency table: Research questions and propositions**

| RQ # | State Research Question | Prop/hyp # | State Proposition or Hypothesis |
|---|---|---|---|
| 1 | What value can be derived from the effective adoption of technology in the legal environment? | 1 | Strategic TA can increase the value of products and services in the legal environment showing significant increases in business results. Legal providers that effectively deploy technology are outperforming the TLF including metrics such as (1) efficiency, (2) competitive advantage, (3) profitability, and (4) market value. |
| 2 | Which business management principles can be deployed to surpass these constraints and increase the adoption of new technologies in the legal environment? | 2 | For law firms to extract the maximum value that can be created for their businesses it is not enough for TLF to merely apply the new technologies to their current business models. The TA must be done in conjunction with the business management principles of DT to increase their levels of DM. |
| 3 | What are the main constraints for TA and the modernization | 3 | The traditional law sector is lagging when it comes to technological adoption mainly due to a lack of knowledge and resistance to change. This is creating the opportunity for the |

| RQ # | State Research Question | Prop/hyp # | State Proposition or Hypothesis |
|---|---|---|---|
| | of the business models of SLF in SA? | | earlier adopters and new entrances to disrupt the market. |
| 4 | What are the limitations or adaptations necessary when using these management principles considering this industry and the context of SA? | 4 | Despite having a unique background, the literature so far shows that the legal sector of South Africa has similar trends as seen globally regarding TA and its business structure. |

## 2.6 ANALYTICAL FRAMEWORK

### 2.6.1 *Theoretical Framework*

#### a. *Technological Adoption*

The concept of technological adoption is usually seen as linked to theories relating it to factors that influence its adoption by individuals, companies, and society as the latter are formed by groups of people.

Straub (2009) focussed his study on analysing and understanding if theoretical bases, independently or combined, could help to deconvolute the reasons why individuals and societies opt to adopt or reject certain technological-based-innovations. Although using the insights for application in a very different environment, in his studies the author referenced an influential theory on the subject from Everett Rogers's work namely, "The diffusion of Innovations of 1962, with the latest edition (2010).

Roger`s (2010) theory is one of the most complete and flexible. The characteristics that provide this model are still used for multiple sectors and types of innovation (Alkhowaiter, 2020; Alsheibani et al., 2018; Naicker & Van Der

Merwe, 2018), including informal socio-economic environments (Kumar & Bhaduri, 2014; Pankomera & van Greunen, 2019). This is because the theory introduced by Rogers (2010) exposes factors that contribute to and inhibit technological adoption from the perspectives of individual adoption and the diffusion of this adoption into society. He also relates them using a cross-field point of view.

The components of his innovation and diffusion theory as presented by (Straub, 2009) are summarized in Table 3.

**Table 3: Components of Innovation Diffusion Theory**

| **Stages of Adoption: Individuals Decision Process (Chronological Order)** | **Components of the diffusion theory (Spread from the individuals to individuals across time)** |
|---|---|
| 1- AWARENESS: of the existence of innovation. This stage is influenced by personal characteristics, socio-economic context, and access to change agents (social and mass media for example). | 1- THE INNOVATION: attributes that the innovation itself has that may influence its diffusion. These attributes are relative advantage, compatibility, trialability, and observability. |
| 2- PERSUASION: when an individual acquires enough knowledge regarding the innovation and its characteristics to make a personal judgment concerning it. | 2-COMMUNICATION CHANNELS: comprises the vehicles and mechanisms by which the information regarding one innovation is passed between individuals. |
| 3- DECISION: of adoption or not. | 3- SOCIAL SYSTEM: context, culture, and the environment of the individuals. |
| 4- IMPLEMENTATION: actions that individuals take regarding the innovation according to the previous stage. | 4-TIME: analyses which makes individuals adopt a particular innovation earlier or later, and which characteristics influence that. |
| 5- CONFIRMATION: individuals evaluate and choose if they will maintain or discontinue the use of the innovation. | |

**Source: Adapted from Rogers (2010) and Straub (2009)**

Regarding the “time” component, Rogers (2010) created the now famous classification of the individual into groups according to the time that they take to begin using new technology in comparison with the general diffusion curve. Dividing them into early adopters, early and late majority, and late adopters, as can be seen in Figure 3:

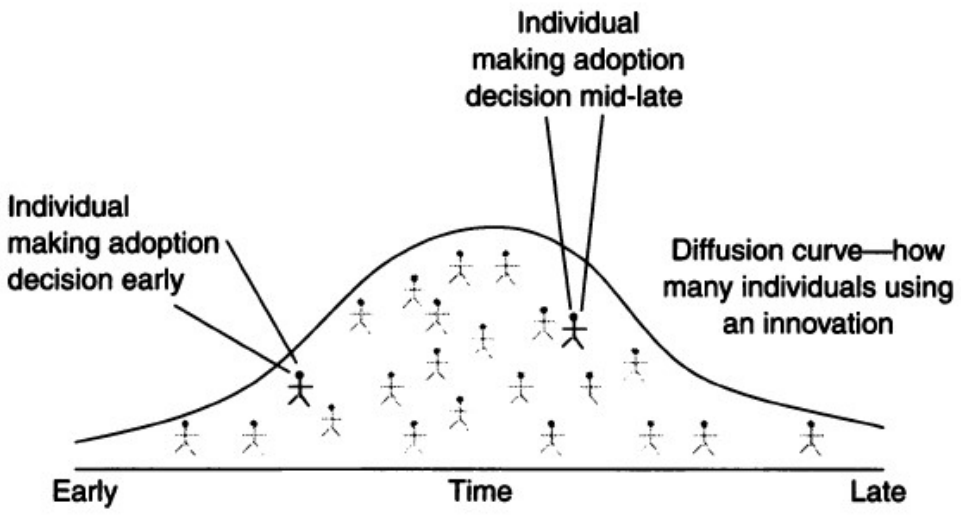


**Figure 3: How individuals adoption compose diffusion**

**Source: Straub (2009, p. 627)**

The Technology Acceptance Model (TAM), a theory developed by Davis (1987) has close ties with the Innovation Diffusion Theory (Straub, 2009). From another perspective, TAM theory differentiates itself from other models as it focuses on specific types of innovation (computer-based information technologies) rather than the general broader environment and was developed to be applied to corporations.

TAM was one of the first models to study how the individual perception of characteristics of the technologies may affect if they would later choose to adopt the technology or not (Straub, 2009). Davis (1987) found that two perceived characteristics were determinants of an individual’s decision: (1) the perceived usefulness, and (2) the perceived ease of use. Both concepts are defined by Davis (1987, p. 320) as follows:

*'**Perceived usefulness** is defined here as "the degree to which a person believes that using a particular system would enhance his or her job performance" (…)*

***Perceived ease of use,** in contrast, refers to "the degree to which an individual believes that using a particular system would be free of effort"'*

Although TAM theory received some criticism (Davis & Venkatesh, 1996; Straub, 2009), the model initiated an intensive debate from a perspective not previously addressed (Chuttur, 2009; King & He, 2006), and served as a base for many other theories and studies to emerge from (Al-Emran et al., 2018).

Indeed, technological adoption and the reasons that influence it to involve a complex and everchanging relationship of factors (Straub, 2009). Thus even though the innovation itself may be very easy to implement and prove useful, contextual factors often inhibit its adoption (Rogers, 2010).

Notwithstanding the efforts by authors such as (Dwivedi et al., 2019; Dwivedi et al., 2020; King & He, 2006); Venkatesh et al. (2003), the reality is that it is unlikely that a single model can describe all the variables relating to individuals technological adoption and social aspects encompassing this topic in differing contexts and for various types of innovation.

However, despite these shortcomings, the literature also shows an improved understanding of the reasons that may inhibit or assist the individual decision for successful TA by companies (Dwivedi et al., 2019; Venkatesh et al., 2003). Considering this point, this study used, as the primary basis for the analysis of technology adoption, the TAM Theory (Davis, 1987) since it considers a different point of view that is very much aligned with the context of this research, particularly regarding TA.

However, elements of the theory of diffusion of innovations (Rogers, 2010) can also be employed to complement the previous theory as it is the most comprehensive model and better relates to the concepts of digital transformation and digital maturity.

### b. *Digital Transformation and Digital Maturity:*

The literature shows the positive relationship between the capacity of a business to leverage the full benefits when new technologies are deployed in their business models when this application is made in conjunction with the principles of digital transformation and digital maturity, as covered previously in this chapter. Due to this phenomenon, several theories and studies regarding these concepts are being developed.(Hinterhuber & Nilles, 2021; Saarikko et al., 2020)

Usually, the authors attempt to provide a single model to access the digital maturity of a company (Gill & VanBoskirk, 2016; VanBoskirk et al., 2017; Westerman et al., 2012), or analyse it from a specific industry perspective (Zapata et al., 2020). Then after the assessment, the results are used as a basis for further analysis of where the company currently is in its digital transformation journey and what the next steps are for it to improve its digital maturity level, surpass its competitors, and achieve better business performance and results.

Amongst these theories, this study will utilize the findings of Westerman et al. (2014) complemented by the insights of Armstrong and Lee (2021) regarding these concepts as they provide the best support for the discussions of this work.

## 2.6.2 *Conceptual Framework*

Figure 4 shows the overall view of the conceptual framework and how the key variables of this research: (1) technological adoption (TA), (2) digital transformation (DT), and (3) digital maturity (DM) relate to each other and the outcomes of the findings.

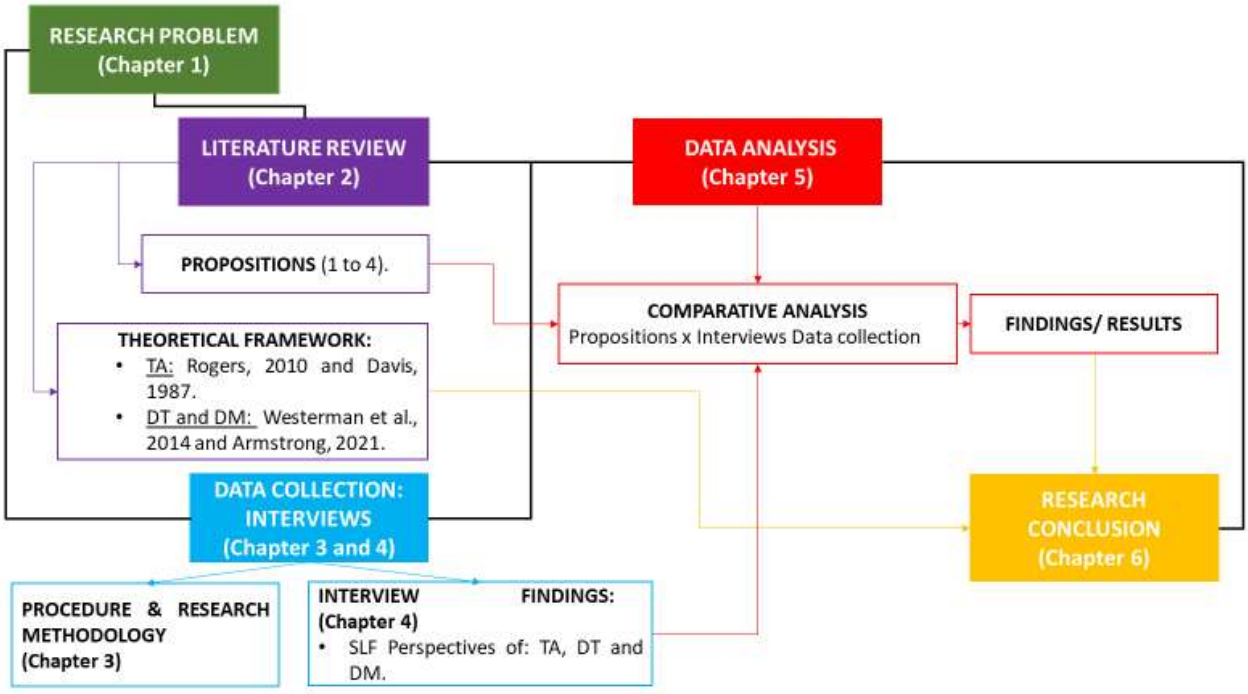


**Figure 4: Conceptual Framework denoting the relationship between TA, DT, and DM**

As discussed, the research commences with the challenge of the STLF, which needs to modernize its organisation by strategically adopting new technologies but lacks the ability and skills to do so. Therefore, with the research questions outlined in Chapter 1.4 as the basis, the study continued with a literature review regarding this topic for a clearer understanding of (1) the state of the art, (2) the SA legal market context, and (3) extracting the propositions and theoretical frameworks. In parallel, the research analyses the data obtained through interviews of legal practitioners according to the procedure and research methodology discussed in Chapter 3.

After the application of the coding and content analysis method, the findings are presented in Chapter 4, in categories that emerged from the interviews. By the end of this Chapter, the research aims to expand the knowledge concerning the topics under investigation from the perspective of the legal practitioners that work inside these organizations on a day-to-day basis.

Chapter 5 encompasses the analysis of the primary data from a different point of view by comparing the interview findings of the previous chapter with the

propositions of Chapter 2 thereby aiming to understand how well the literature regarding the topics being examined correlates with the reality of the SLF within South Africa.

Finally, Chapter 6 details the conclusions regarding each of the research questions and detail recommendations for the SLF produced based on (1) the findings of the interviews, (2) the theoretical framework, and (5) the results of the data analysis covered in previous chapters.

The purpose is to conclude the research by showing general principles and practices adapted for the context studied that can assist the TLF to increase TA by surpassing their primary inhibitors obtained by real-life observations. With this, the research aims to assist small law firms within SA that still deploy traditional business models to modernize these, contribute to help prepare these companies for the future and assist them in leveraging the benefits of an efficient technological application as reviewed in Chapter 2.3 above.

# CHAPTER 3. RESEARCH METHODOLOGY

## 3.1 Introduction

The literature usually highlights three methodologies which can be utilized in research: (1) quantitative, (2) qualitative, and (3) mixed-method (Leedy & Ormrod, 2015). Method (3) comprises a combination of the two previous methods (Creswell, 2018, p. 294). This paper utilizes the qualitative approach.

To further describe the selected research approach and its application, this Chapter begins by outlining the rationale of this choice and the research design. This is followed by a discussion of the data analysis and collection methods including points regarding the population and sample utilized as the basis for this investigation.

Finally, the limitations of the study, transferability, dependability and ethical considerations are described at the end of the chapter.

## 3.2 Research methodology

When considering the investigation of the research problem and questions, it is essential to adopt a research methodology that enables the ability to analyse feelings, emotions, and non-numerical data in general. There is also a need to explore the underlying reasons for lawyers' and attorneys' preferences regarding technologies and their applications (Rogers, 2010).

These considerations arise from individual choices which may shape the TA of law firms, which when expanded, form the overall reality of the South African legal industry. An assumption that can be made based on the theory of diffusion of innovation by Rogers (2010) as discussed in Chapter 2.6.1

Therefore, a qualitative research method (Sharan & Elizabeth, 2016) is well suited considering the description of this methodology from Creswell (2018, p. 41):

*"an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem".*

Furthermore, Herbst and Coldwell (2004, p. 13) comment on the type of information analysed by qualitative research and show the compatibility of this methodology with the type of information under investigation:

"*As a general rule, information is considered qualitative in nature if it cannot be analysed by means of mathematical techniques."*

From another perspective, the literature reviewed in Chapter 2 also indicated a trend that the TA in the South African legal sector has mostly been inhibited by the same factors reported in other parts of the world and are: (1) the lack of knowledge, (2) and resistance to change. However, these assumptions may change slightly or even significantly after contrasted with the observations made when considering South Africa's law firm context. For this reason, the capacity of the qualitative methodology to deal with emergent results (Leedy & Ormrod, 2015, p. 270) and its wide variety of data collection methods were further determining factors for the selection of this methodology over the alternative methods.

## 3.3 Research approach

Inductive reasoning is generally utilized in qualitative content analysis research when the topic under investigation lacks or has limited previous creations of theories and research findings, while the exact opposite can be said about deductive reasoning (Armat et al., 2018). Therefore, inductive reasoning is well suited to this study as there are only a few authors who have addressed TA and DM in the context of the SA private legal market.

Moreover, Armat et al. (2018, pp. 219-220), made the following observations regarding the application of the inductive reasoning approach:

*"(…) In this approach, the analyst's mind is not entirely blank at the beginning of the study, instead, he has the research question(s), study aims(s), and/or some pertinent assumptions, practically directing his analysis (…). Moreover, as the analysis progresses will emerge inductively, making tentative hypotheses (…). The analyst, then, would test or examine these hypotheses during the rest of the analysis process (…).*

Considering this description, it is easy to see that although the research does not intend to provide theories or construct hypotheses about the topics studied, its framework contains important similarities with this approach as illustrated in Figure 4, above.

More specifically, the application of inductive reasoning begins by taking the propositions of Chapter 2 and contrasting them against the real-life scenario of South African law firms. Firstly, gathering of the raw data through interviews that are conducted with legal practitioners who work or have worked in SLF in SA. Thereafter, analysis of the data aims to detect patterns by comparison against the propositions.

Finally, the findings and conclusions are presented by correlating the findings with the research questions to provide answers regarding what the best general business practices to assist law firms would be to (1) increase their levels of TA, and (2) maximize the results provided by the technologies. During the assembly of these conclusions, theories and frameworks regarding digital transformation and maturity models (Armstrong & Lee, 2021; Westerman et al., 2014) will be considered.

## 3.4 Research design

The research design can be defined as a plan to answer the questions of one study (Saunders, 2016). Or, as suggested it is;

*" (…) a strategic framework for action that serves as a bridge between research questions and the execution or implementation of the research."*(Blanche et al., 2006, p. 34)

The literature varies when it comes to classifying the types of research design (Bryman et al., 2014; Creswell, 2018). However, regarding the design, this study will deploy the classification method of Leedy and Ormrod (2015) comprised of basically five types: (1) case study, (2) ethnography, (3) phenomenologic, (4) grounded study, and (5) content analysis.

The main features regarding each type are summarized in Table 4.

**Table 4: Distinguishing Characteristics of Different Qualitative Designs**

| Design | Purpose | Focus | Methods of Data Collection | Methods of Data Analysis |
|---|---|---|---|---|
| **Case Study.** | To understand one person or situation in great depth. | One case or a few cases within its/their natural setting. | • Observations.<br>• Interviews<br>• Written documents and/or audio-visual material. | • Categorization and interpretation of data in terms of common themes.<br>• Synthesis into an overall portrait of the case. |
| **Ethnography.** | To understand how behaviours reflect the culture of a group. | A specific field site in which a group of people shares the same culture. | • Participant observations.<br>• Interviews with "informants".<br>• Artifact/ document collection. | • Identification of significant phenomena and underlying structures and beliefs.<br>• The organisation of data into a logical whole. |
| **Phenomenological.** | To understand an experience from the participant's point of view. | A particular phenomenon as is typically lived and perceived by human beings. | • In-depth unstructured interviews.<br>• Purpose sampling of 5-25 individuals | • Search for *meaningful concepts* that reflect aspects of the experience.<br>• Integration of those concepts into almost a typical experience. |
| **Grounded theory study.** | To derive a theory from data collected in a natural setting. | A process including human actions and interactions and how they result from and influence one another. | • Interviews<br>• Other relevant data sources. | • A prescribed and systematic method of coding data into categories and identifying interrelationships.<br>• The continual interweaving of data collection and analysis.<br>• Construction of a theory from the categories and interrelationships. |
| **Content analysis.** | To identify the specific characteristics of a body of material. | Any verbal, visual or behaviour form of communication. | • Identification and sampling of the material to be analysed.<br>• Coding of the material in terms of predetermined characteristics | • Tabulation of frequency of each characteristic.<br>• Descriptive or inferential statistical analyses as needed to answer the research question. |

**Source: Leedy and Ormrod (2015, p. 276)**

Amongst these types, the study will apply content analysis design as it is commonly utilized for examining a body of material in a systematic way to identify patterns, themes, or biases (Leedy & Ormrod, 2015, p. 275). Consequently, the

content analysis in this research will enable the investigation of the responses to the questions covered in Chapter 1.4 in a pre-established and structured way. This decreases the risks of factors such as subjectivity and/or personal biases of the researcher to influence the data extraction and analysis regarding the topic studied. Moreover, this design is also coherent with the inductive approach of the research.

## 3.5 Data collection method

A qualitative research approach often provides a wide range of possibilities regarding data collection methods. In general, the literature points towards four types: (1) observations, (2) interviews, (3) documents, and (4) audio-visual digital materials (Creswell, 2018; Leedy & Ormrod, 2015). The research will employ individual interviews to collect the data necessary for the investigations proposed by this study. The individual interviews were chosen over the group format considering the following advantages in this scenario:

- Participants might be more comfortable sharing their personal beliefs regarding technological adoption in a setting that does not include their peers. Comparison and fear of projecting a more conservative image or being judged in some form by others may bias the responses in group settings.

- The opinion vocalized by one participant in a group may influence the initial opinion and response of other members, especially in diversified groups. For example, a senior advocate may verbalize one belief that is contrary to the personal perspective of a recently graduated attorney. In this situation, the latter may believe that their vision is incorrect because of their lack of experience and simply replicate the perspective of others, when in fact, all the perspectives are relevant.

## 3.6 Population and sample

### 3.6.1 *Population*

Leedy and Ormrod (2015, p. 279) made the following comment regarding the concept of the population when describing the process of determining the sample in the context of qualitative research:

"(…) *How you identify your sample must depend on the research question(s)you want to answer. If you want to draw inferences about an entire population or body of objects, you must choose a sample that can be presumed to represent that population or body."*

Following this perspective, the population of this research constitutes South African lawyers, paralegals, attorneys, advocates, or any type of legal practitioner that operates either solo or inside law firms, that utilize or wish to apply technology to add value to their business.

### 3.6.2 *Sample and sampling method*

Often, analysing the entire target population for research is not viable due to its inherently large size. This study is no exception to this. To address this issue, the literature developed multiple sampling methods to select a part of individuals or cases as representative of the population. Usually dividing them between probability and non-probability sampling methods (Etikan & Bala, 2017; Schreuder et al., 2001). In simple terms, probability methods enable the entire population to have an opportunity to be selected to integrate the sample studied. While non-probability methods allow only a group selected by the researcher to collaborate with the investigations as primary sources of data (Leedy & Ormrod, 2015).

The complexity regarding time and resources that would be involved in the development of a unified database that encompasses all legal practitioners of SA hinders the utilization of the probability sample method for this study. Consequently, the research opted for utilizing the non-probability method of snowball sampling, as described by Kirchherr and Charles (2018, p. 1):

*“Snowball sampling (…) is a sampling method in which one interviewee gives the researcher the name of at least one more potential interviewee. That interviewee, in turn, provides the name of at least one more potential interviewee, and so on, with the sample growing like a rolling snowball if more than one referral per interviewee is provided.”*

The research will apply this model in a series of steps as described below:

- **Sample Frame:** legal practitioners, preferably lawyers and attorneys of small law firms in SA.

- **Sample size:** Considering the complexity involving the process to form an appropriate sample size, the research will determine it by following the guidelines provided by Leedy and Ormrod (2015, p. 280) as exposed below:

    - *"Be sure that the sample includes not only seemingly “typical” but also seemingly “non-typical” examples.*
    - *When a power hierarchy exists (…) sample participants from various levels in the hierarchy. (…)*

  Based on these principles and considering that this qualitative research aims to provide rich data production regarding the research questions (Leedy & Ormrod, 2015), it is estimated that the sample will involve between 8 to 20 participants. However, the sample size acquired might vary significantly once the data gathering and analysis process start.

  **Applying the snowball sampling method:** The first participants will be purposively selected for the study to enable the application of this sampling method. Regarding the databases for this selection, the research will prioritize the use of websites of organisations that are purposefully formed by members that integrate the target population and make their data publicly available, such as the South African Bar Association, National Bar Council of South Africa (NBCSA), and Advocates Group 621. The participants who accept the invitation sent by the researcher will be then encouraged to send invitations to colleagues and other legal practitioners that they know until enough samples are collected. Forming an exponential non-discriminative pattern of snowball sampling, as shown in Figure 5.

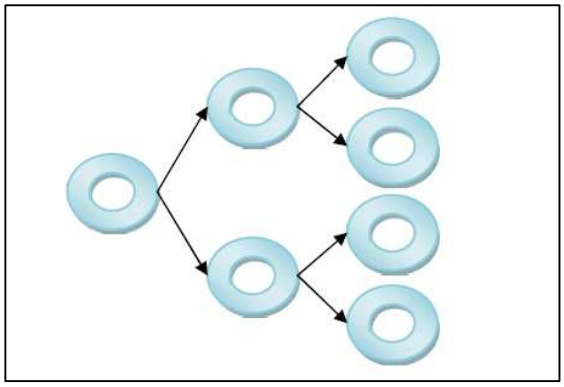

**Figure 5: Exponential non-discriminative snowball sampling.**

**Source: Voicu and Babonea (1997, p. 1344)**

### 3.6.3 *Demographic profile of respondents*

This study aims to obtain a sample that reflects, as closely as possible, the general demographics of law firms in South Africa as described in the study (LSSA, 2021). With this objective in mind the study will endeavour to compose a sample by sending invitations to the participants, aiming to achieve a group formed by individuals according to the proportion below:

- Gender: female (42,2%) and male (57,8%)
- Race: black, coloured, and indian (45,7%), white (54,3%).
- Type of company: small law firms (2 to 20 employees/legal professionals) (83%)

## 3.7 The research instruments

As mentioned, the research utilizes interviews as the primary source of data to answer the research questions covered in Chapter 1.4. To assist in this task the research will make use of an interview guide comprised of 11 (eleven) questions divided into two parts:

**PART 1**
Number of questions: 5
Theme: Current technology availability and practices

**PART 2**
Number of questions: 6
Theme: Digital maturity and technology adoption

The part of the interview guide related to questions three and four of the research, as shown in Table 5, intends to also understand these themes indirectly, by accessing: (1) which technologies were deployed in their business, (2) what their perception regarding the market tendencies are and (3) what the implementation process of their law firms regarding TA is.

After this, the data collected will be analysed using content analysis and the insights utilized as a base for observing the propositions extracted from the literature. The format of the virtual interviews will allow for open-ended questions and closed-ended questions in a semi-structured way.

As posited by Sharan and Elizabeth (2016), the open-ended questions are useful for the extraction of the participant's unique world views, when the researcher already has some knowledge about the topic, while the closed-ended questions can bring specific information that the researcher seeks to know from all the participants.

Moreover, the semi-structured format was selected because most of the studies on the subject of technology in the SA legal sector were made as reports based on participants' responses to surveys comprised of only closed-option questions (Afriwise, 2020; Eventful, 2020; LSSA, 2021). Therefore, because of its rigid structure, the findings of these surveys were restricted to pointing out general trends and were unable to explore the underlying reasons behind these.

The objective of this research is to utilize a more flexible structure comprised of partially open-ended questions. At the same time, the use of closed questions assists this study by providing the necessary guidance to promote the extraction of the relevant common data from the participants.

This research did not make use of any specific theoretical framework model for creating the structure of the questions. Although it makes use of the best interviewing practices according to the literature (Creswell, 2018; Leedy & Ormrod, 2015; Sharan & Elizabeth, 2016).

The preview of the interview guide and the relation to each of the two research questions investigated by this form of data collection is summarised in Table 5.

**Table 5: Alignment between research questions, propositions, and interview guide**

| RQ # | State Research Question | Prop/hyp # | Related questions: Interview guide |
|---|---|---|---|
| 1 | **What value can be derived from the effective adoption of technology in the legal environment?** | 1 | **PART 1**<br><br>3- What do you perceive as the advantages/disadvantages when utilizing the technologies available at your law firm? Please describe the main ones that come to mind.<br><br>**PART 2**<br><br>2-What benefits do you believe can be derived for a law firm that is digitally transformed, and deploys technology in alignment with its business objectives? Please describe. |
| 2 | **What are the main constraints for TA and the modernization of the business models of small law firms in SA?** | 2 | **PART 1**<br><br>1- Are you aware/ familiar with these technologies? Please include/select all the corresponding options.<br><br>☐ Practice management tools<br>☐ Contract management tools<br>☐ Security management tools<br>☐ Prefer not to answer<br><br>2- Does your law firm currently use, one more of these technologies mentioned above? Please include/select all the corresponding options<br><br>☐ Practice management tools<br>☐ Contract management tools<br>☐ Security management tools<br>☐ Prefer not to answer |

| RQ # | State Research Question | Prop/hyp # | Related questions: Interview guide |
|---|---|---|---|
| | | | **PART 2**<br><br>4- If your organization is at the “beginner” or “intermediate” phase, what factors do you believe may be preventing the effective adoption of the existing technologies by your law firm, or are currently preventing it from introducing new ones?<br><br>5- If your organization is at the “advanced” phase, please describe what factors do you believe would contribute to making the implementation of new technologies at your law firm seamless and effective? |
| 3 | **Which business management principles can be deployed to surpass constraints, and increase the adoption of new technologies in the legal environment?** | 3 | **PART 2**<br><br>1- How familiar are you with the concepts of “digital transformation”, “digital maturity” and “technological adoption"?<br><br>☐ Not aware, just heard about it now.<br>☐ I consider my knowledge to be superficial.<br>☐ I am familiar with it. I consider having a reasonable understanding of it.<br>☐ I am fully aware of it. I consider having a very good understanding of the topic.<br>☐ Prefer not to answer.<br><br>3- Considering the difference between the concepts of “digitisation”, “digitalisation” and the classification defined above, in which phase of the digital transformation process do you believe your law firm currently is? Please consider your answer to the following questions.<br><br>☐ Digitalisation of information (beginner)<br>☐ Digitalization of processes (intermediate).<br>☐ Digital transformation (advanced).<br>☐ Prefer not to answer.<br>☐ Other:_____ |

| RQ # | State Research Question | Prop/hyp # | Related questions: Interview guide |
|---|---|---|---|
| 4 | **What are the limitations or adaptations necessary when using these management principles considering this industry and the context of SA?** | 4 | **PART 1**<br><br>4-How did Covid-19 change the way the legal services are provided in your law firm if at all? Do you believe these changes will continue post-Covid-19?<br><br>5-Imagine a scenario where new technologies such as AI and machine learning dramatically modify the way legal services are provided in SA. How do you believe your law firm would deal with disruptions due to new digital trends and innovations?<br><br>**PART 2:**<br><br>6. Would you like to add/share any additional information about the topics discussed during this interview? |

The information sheet, describing how the collected data will be utilized, consent forms, and the full instrument utilized in the interviews, can be seen respectively in Appendix A, B1, B2, and C.

## 3.8 Procedure for data collection

The individual interviews will be held preferably via real-time computer communication channels, especially meeting applications such as Zoom or Microsoft Teams. This procedure is also known in the literature as a synchronous method of conducting online interviews (Sharan & Elizabeth, 2016).

This specific procedure was selected considering the current limitations presented in the following Chapter 3.10, in conjunction with the advantages of data collection (Sharan & Elizabeth, 2016), described below:

- No geographic constraints: if they have a high-quality internet connection, participants can join from any place in South Africa.
- Convenience: respondents may find it easier to participate online in comparison with a traditional face-to-face meeting.
- Data keeping: possibility of recording the interaction and revisiting verbal and nonverbal cues.
- Data richness: the interviews are made in real-time, especially when the participant agrees to do it on camera and thereby almost replicating a face-to-face physical interview.
- Covid-19: with the increased necessity of utilizing online channels due to the sanitary restrictions imposed by the government to contain the spread of the COVID-19 virus, the participants tend to have gained more knowledge and be more open to assisting the study with online meetings.

The online procedure of interviews also presents some disadvantages (Sharan & Elizabeth, 2016):

- Not everyone has access to knowledge of how to use these tools.

- The participants might experience technical difficulties such as breakups or failures in the internet connection that may disturb them and impact negatively on the interaction.
- Ethical issues, regarding confidentiality, have been compromised.

However, considering the profile of the participants, the advantages of the online real-time interview procedure surpass the disadvantages of this research.

Concluding, asynchronous methods (Sharan & Elizabeth, 2016) e.g. Email interviews, and online questionaries (Sharan & Elizabeth, 2016) may also be utilized depending on the availability and preference of the respondents.

The asynchronous methods were also selected as an option due to this convenience for the participants and their compatibility with the snowball sampling method (Kirchherr & Charles, 2018).

## 3.9 Data analysis and interpretation

As mentioned, this qualitative study will utilize the content design and gather the primary data through individual interviews with the groups of participants that integrate the sample.

The raw data that will be analysed utilizing the coding method as defined by Creswell (2018, p. 269):

*"Coding is the process of organizing the data by bracketing chunks (or text or image segments) and writing a word representing a category in the margins (Rossman & Rallis, 2012). It involves taking text data or pictures gathered during data collection, segmenting sentences (or paragraphs) or images into categories, and labelling those categories with a term, often based on the actual language of the participant (called an in vivo term)."*

Creswell (2018, p. 269) also suggests a series of steps to guide researchers when applying the coding method in qualitative research to facilitate and guarantee that the accuracy of the information is maintained throughout the entire process.

An overview of this process is illustrated in Figure 6.

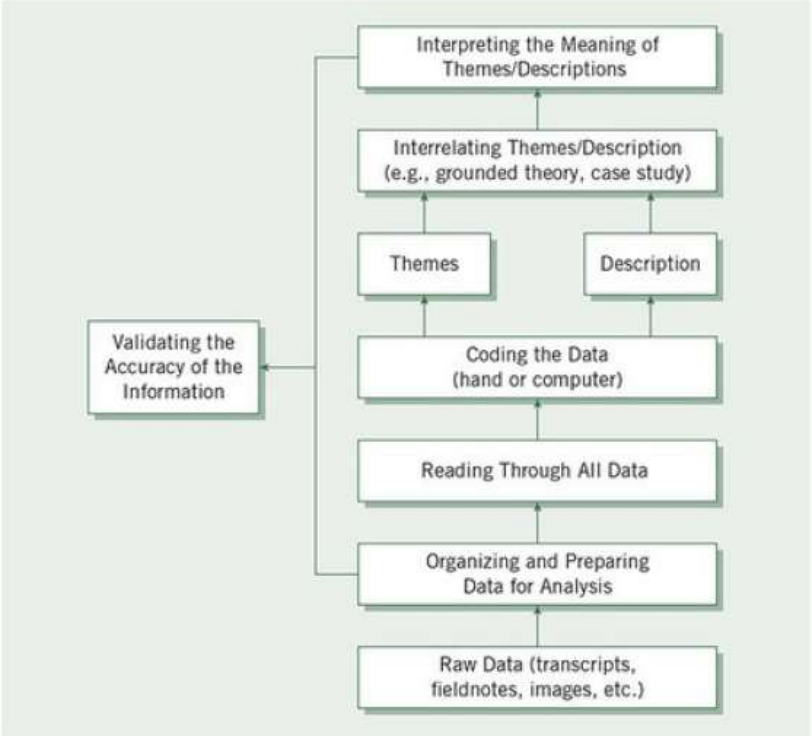


**Figure 6: Data Analysis in Qualitative Research**

**Source: Creswell (2018, p. 269)**

Therefore, the data analysis of this study will follow the steps below, created exclusively for this research by adapting the procedure regarding the application of the content analysis and coding method based on this author and other relevant literature regarding the theme (Bengtsson, 2016; Creswell, 2018; Heath, 2021; Luo, 2019)

- **Content analysis:** Responses of online interviews made with legal practitioners that work in small law firms in SA. Depending on the media chosen by the participant the content can be received directly through a written form (e-mail, online questionnaire) or by a transcription of the content obtained via other media such as audio or video.

- **Units of analysis:** Bengtsson (2016, p. 10) explains that:

  "The concept *unit of analysis* refers to the sample, and the researcher has to determine whether the material is to be analysed in its entirety or divided into smaller units."

The content of the raw data extracted from the interviews will be analysed in a single unit. This will be possible because the population and sample already sufficiently delimitate the unit of analysis for this study.

- **Preparing the data for analysis:** reading through all the data, organizing, excluding unnecessary information, and keeping records and files regarding the transcriptions of the interview answers. At this stage, the researcher will gain familiarity with the content of the primary data.

- **Preliminary coding categories:** the categories regarding TA will be divided and coded according to the research questions that the study aims to answer: (1) value, (2) inhibitors/challenges, (3) implementation process, and (4) SA tendencies. Although pre-defined at this point, the categories of codes constitute only a starting point for the investigations. Therefore, they may change depending on the findings extracted from the answers.

- **Develop the set of coding rules:** the coding will be developed utilizing a conceptual analysis inductively and openly, by detecting what themes, words, sentences, and phrases emerge from the answers of the participants regarding each category defined above. Under this phase, the existence of themes and their frequency (number of recurring appearances) in the content analysed will be considered.

- **Coding, revising the categories, and generating a description of themes:** will be done according to the rules mentioned in the previous steps. The research might utilize the assistance of computer programs and software such as Atlas.ti for coding, generating themes, and defining or redefining the categories.

- **Analysing the results and drawing conclusions:** based on the findings, the study will conclude by producing general guidelines according to the primary problems and insights observed. The results will be summarized in form of tables and/or illustrations thereby increasing the transparency and trustworthiness of the analysis.

Regarding interpretation, this study will conclude by analysing and contrasting the insights regarding the primary data after the analysis phase with the propositions extracted by the literature as described in Chapter 2.

Additionally, business tools and principles extracted from the literature may be suggested to assist with the most common inhibitors and challenges for TA in the small law firms of SA.

Finally, limitations not foreseen in the next section and unanswered questions of this research detected during the data analysis process may also be utilized as starting points for the further development of this topic in future studies. Therefore, an interpretation process similar to the one pointed out by Creswell (2018, p. 273) as highlighted below may be formed:

*"**Interpretation in qualitative research** involves several procedures: summarizing the overall findings, comparing the findings to the literature, discussing a personal view of the findings, and stating limitations and future research. (…)*

*It could also be a meaning derived from a comparison of the findings with information gleaned from the literature or theories. In this way, the authors suggest that the findings confirm past information or diverge from it. It can also suggest new questions that need to be asked—questions raised by the data and analysis that the inquirer had not foreseen earlier in the study."*

## 3.10 Limitations of the study

To investigate the factors related to the inhibitors of technological adoption by small South African law firms, primary research methods will be conducted with a member of these organisations.

Due to the limitations imposed by the government health protocols to contend with the spread of COVID-19 in SA, the primary research will consist of interviews made with the target participants via remote communication channels.

Although the possibility of online interviews may broaden the geographical location range allowing participants from all over the country as described previously, it could also limit the study and its results.

A lack of resources and infrastructure such as interruptions in energy supply, high cost of internet access, and low technological skills may diminish the availability of lawyers and attorneys to participate in the interviews. There is also a possibility that these resource limitations could influence to some degree the results of the primary research. This may occur as the diversity seen in the population of SA and the inequality still present due to historical factors, including the legacy of apartheid seen in the legal sector (Africa-LSSA, 2018).

Therefore, some groups may be impacted differently by the limiting factors and resources mentioned which can be a challenge when it comes to building the sample for this research. This study will try to surpass this limitation by including different racial groups, gender diversity, and age differentiation whenever possible, aiming to reflect the general demographics of the sector, as described in Chapter 3.12.

From another perspective, the SA government, and official national and international organisations, unfortunately, provide little range of studies or statistics about technology adoption amongst TLF and solo practitioners and the ones that do are often not up to date.

This research will aim to mitigate the impacts of this gap as well by using the primary research method, to confirm the representativity and the information provided by these organs.

## 3.11 Transferability and Dependability

In quantitative research, numerical data is applied via defined methods. Due to this, there is a clear standard applied in quantitative studies to assure validity and reliability. This standard involves the researcher fulfilling the criteria of (1) generalisability or external validity (2) reliability, (3) internal validity, and (4) objectivity (Lincoln & Guba, 1986).

However, when analysing non-numerical data, as occurs in all qualitative research, most of the literature shows that is not possible to utilize the same criteria as seen in the previous research methodology approach (Lincoln & Guba,

1986; Sharan & Elizabeth, 2016; Tracy, 2010). Unfortunately, this is as far as the agreement of the literature goes.

Currently, several different studies address in multiple ways how to provide credibility and validity for this type of research method (Creswell, 2018; Leedy & Ormrod, 2015; Lincoln & Guba, 1986; Sharan & Elizabeth, 2016).

This research will adopt the criteria of (1) transferability, (2) credibility, (3) dependability, and (4) confirmability, with the assistance of techniques described by Leedy and Ormrod (2015) to show how the procedure of this research addresses these points.

### 3.11.1 *Transferability*

As the name suggests, transferability is the capacity of the findings of one research work be able to be generalized inside other fields, contexts, or settings (Trochim, 2020). As shown, this study is conducted in the context of the South African legal market, aiming to assist particularly small law firms to modernize their business models. In addition, it is being conducted during the ongoing effects of the Covid-19 pandemic, which proved to be a very disrupting event regardless of the industry, country, or sector (Donthu & Gustafsson, 2020). Therefore, the transferability of this study may be limited when considering these characteristics.

However, this research can provide useful insights and outcomes for law firms located in other countries with similar socio-economic scenarios as seen in South Africa. It can also assist other industries and small companies to modernize their business models and service provision, such as accounting and consulting.

### 3.11.2 *Credibility*

Credibility is the attribute that establishes that the data collection and results of one qualitative study are believable (Trochim, 2020) and trustworthy, therefore are worth taking into consideration by others.

In qualitative studies, usually, the capacity of the researcher must simultaneously be (1) an instrument to detect patterns, and social dynamics and organize themes and concepts to create new theories, (2) while trying to diminish the influence of their vision or any bias regarding the investigated topic is a crucial skill to increase the credibility of the data collection and analysis in any paper. This is a challenging task to achieve, especially when the researcher has a personal experience and vision regarding the topic.

For this reason, this research will:

- Make use of technology to assist in data analysis. Minimizing deviations and interpretational biases. Detect the themes and organize the categories and subcategories when coding prioritizing using terms that emerged from the answers of the participants and following the rules and interpretation principles exposed in Chapter 3.9.
- Clearly distinguish between data and memos, registering separately (1) transcriptions, (2) documents, and (3) studies from their (4) observations. Although simple, this technique mentioned by Leedy and Ormrod (2015) avoids any confusion between the interpretation and the data collected.

### 3.11.3 *Dependability*

The concept of dependability is conducted to make sure that any changes that occur during the research which may influence the approach and or the findings are accounted for. A concept that somewhat relates to the idea of reliability in quantitative data research. (Trochim, 2020).

Considering the influence that the still ongoing due to COVID-19, the data collection, analysis, and interpretation will be done according to the propositions made in this chapter.

If any deviations from the original approach are necessary, the changes will be documented and justified to guarantee the dependability of the results.

### 3.11.4 *Confirmability*

Finally, confirmability is the criteria that regard *"the degree to which the results could be confirmed or corroborated by others"*(Trochim, 2020).

In qualitative research, the levels of confirmability are naturally lower than those seen in quantitative studies. This occurs because the researcher plays an important role in qualitative studies in the analysis and interpretations of a richer database (all non-numeric data) (Leedy & Ormrod, 2015). This does not mean that it is impossible to enhance the levels of confirmability inside qualitative research.

To elevate the levels of confirmability, this study will document the procedures and research data following data analysis steps and interpretation according to the process mentioned in Chapter 3.9. During the procedure the research will also make use of the technique of reflexivity to identify any biases that could potentially affect the course and the findings of the research as described on page 278 by Leedy and Ormrod (2015) :

*"Good qualitative researchers actively try to identify personal, social, political, or philosophical biases that are likely to affect their ability to collect and interpret data- this self-reflection is known as* ***reflexivity****- and take whatever steps they can to reduce such influences."*

## 3.12 Ethical considerations

To avoid any ethical issues, this study will follow the ethical guidelines of Wits University as well as ensure to keep the confidentiality and anonymity of the participants and other collaborators using the following practices:

- The individuals' responses and their identities will be identifiable only to the interviewer during the process of data collection and in the raw data files.
- There will be no disclosure of the identity, the name of their company, or any restricted information obtained during the interactions in the final report or to third parties.

- The raw data and the personally identifiable information will be stored in a single device protected by a password and utilized only by the researcher. The database backup containing any personally identifiable information will be held in a secure cloud storage service (Microsoft one drive and Google drive) accessible only by the researcher.
- All the data collected in the research will be destroyed after the purpose of collection is achieved.
- The data collection will be only taken place with participants who volunteer and previously manifest their agreement through the consent form or by a written remote communication channel.

**Table 6: Consistency table: Research questions, propositions, data collection, and data analysis**

| RQ # | State Research Question or Objective | Prop/hyp # | State Proposition or Hypothesis | Data collection detail | Design and Data analysis method |
|---|---|---|---|---|---|
| 1 | **What value can be derived from the effective adoption of technology in the legal environment?** | 1 | Strategic TA can increase the value of products and services in the legal environment showing significant increases in business results. Legal providers that effectively deploy technology are outperforming the TLF on metrics such as (1) efficiency, (2) competitive advantage, (3) profitability, and (4) market value | Interview guide questions<br>Part 1: 3.<br>Part 2: 2 | Content analysis-coding method |
| 2 | **What are the main constraints for TA and the modernization of** | 3 | The traditional law sector is lagging when it comes to technological adoption mainly due to a lack of knowledge and resistance to change. This is creating | Interview guide questions<br>Part 1: 1 and 2.<br>Part 2: 4 and 5. | Content analysis-coding method |

| RQ # | State Research Question or Objective | Prop/hyp # | State Proposition or Hypothesis | Data collection detail | Design and Data analysis method |
|---|---|---|---|---|---|
| | **the business models of SLF in SA?** | | the opportunity for the earlier adopters and new entrances to disrupt the market. | | |
| 3 | **Which business management principles can be deployed to surpass constraints, and increase the adoption of new technologies in the legal environment?** | 2 | For law firms to extract the maximum value that can be created for your business it is not enough for TLF to merely apply the new technologies to their current business models. The TA must be done in conjunction with the business management principles of DT to increase their levels of DM. | Interview guide questions<br><u>Part 2:</u> 1 and 3<br><br>The answer to this question might be complemented by the literature regarding this topic, based on the findings gathered through the primary data. | Content analysis-coding method |
| 4 | **What are the limitations or** | 4 | Despite having a unique background, the literature | Interview guide questions | Content analysis-coding method |

| RQ # | State Research Question or Objective | Prop/hyp # | State Proposition or Hypothesis | Data collection detail | Design and Data analysis method |
|---|---|---|---|---|---|
| | **adaptations necessary when using these management principles considering this industry and context?** | | so far shows that the legal sector of South Africa has similar trends as seen globally regarding TA and its business structure. | Part 1: 4 and 5.<br>Part 2: 6<br>The answer to this question might be complemented by the literature regarding this topic, based on the findings gathered through the primary data. | |

# CHAPTER 4. PRESENTATION OF RESULTS

## 4.1 Introduction

In this chapter, the results regarding the primary data collection will be presented with aid of tables and graphics illustrating the application of the data collection and analysis methodology as outlined in Chapter 3.

The total sample was composed of 11 legal practitioners from various law firms that are currently (9) or already had experience (2), working in small law firms in South Africa. Most have their law firm located in Johannesburg (9) with other participants from Pretoria (1) and Durban (1). The sample was collected between the 11th and 31st of January 2022. With the given option of (a) booking an appointment online for live interviews or (b) answering the questionnaire through an online interview, all the participants opted for the latter, made with the assistance of Google forms.

## 4.2 Demographic profile of respondents

In terms of race, 54,5% of the total participants were Caucasian/white, and 45,5% comprised a mix of black (27,3%), coloured (9,1%), and Indian (9,1%), as shown in Figure 7.

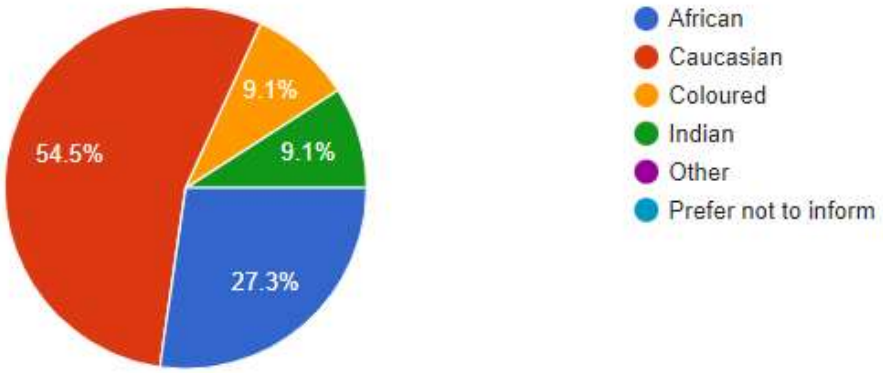


**Figure 7: Demographic profile of respondents by race.**

In terms of gender, 54,5% of the respondents were male and 45,5% were female as shown in Figure 8.

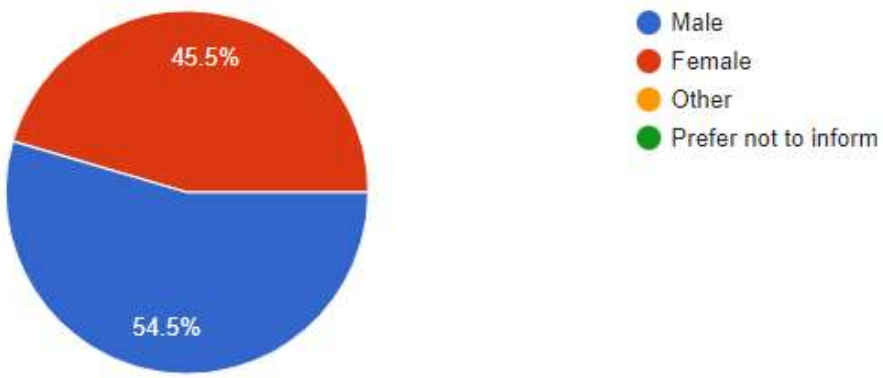


**Figure 8: Demographic profile of respondents by gender.**

Therefore, the demographics of the sample were very much aligned with South African law firms accordingly to LSSA (2021), as mentioned in Chapter 3.12 and presented in Table 7.

**Table 7: Demographic Comparison- SA law firms and research sample**

| Demographic characteristics | SA law firms (LSSA, 2021) | Research sample |
|---|---|---|
| **Gender** | | |
| **Male** | 57,8% | 54,5% |
| **Female** | 42,2% | 45,5% |
| **Total** | 100% | 100% |
| **Race** | | |
| **White/ Caucasian** | 54.3% | 54,5% |
| **Black/Coloured and Indian** | 45.7% | 45,5% |
| **Total** | 100% | 100% |

**Source: LSSA (2021)**

## 4.3 Application of the coding and content analysis method

According to the data analysis and interpretation process outlined in Section 3.9 of Chapter 3, this study initiated the coding method utilizing as category the TA and subcategories such as (1) value, (2) inhibits/challenges, and (3) implementation process.

However, after examining the raw data, the coding categories needed to be adapted for a better understanding of their content and improved alignment between (1) the central point under investigation, (2) the research questions, and (3) the interview guide.

Figure 9 shows the results of this revision with the coding method applied to 3 (three) major categories: (1) technological adoption, (2) digital transformation and digital maturity, and (3) trends in the South African market. The subcategories and their related questions of the interview guide are also correlated in the figure.

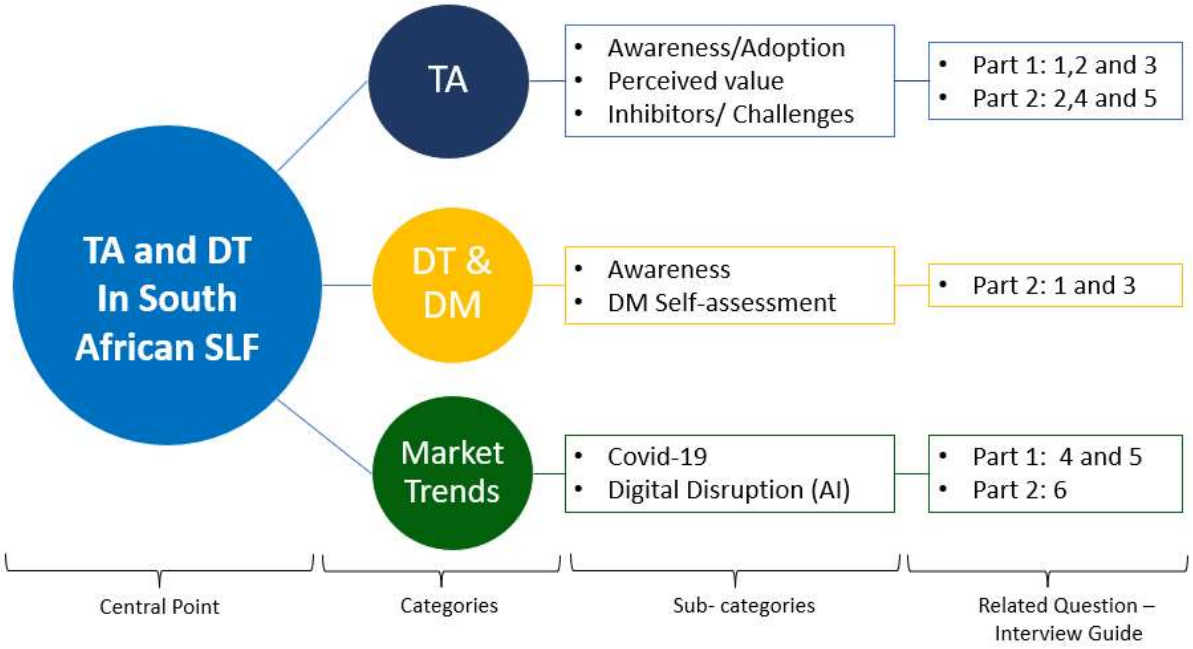


**Figure 9: Application of Coding and Content Analysis Method: Categories, subcategories, and correlation with the interview guide.**

The findings of the primary data collection will be demonstrated in the sections below, by grouping the 11 questions of the interview guide according to each

category and subcategory of the coding method. This is followed by a detailed analysis of the responses, including emergent themes.

## 4.4 Results Category 1: Technological Adoption

### 4.4.1 *Sub-category 1: Awareness / Adoption*

PART 1: Please examine the technologies defined below designed to assist law firms with the questions that follow.

- **Practice management tools:** platform service providers that assist with the infrastructure and management of law firms' daily activities. Including software to manage human resources, data, documents, finance, and communications with clients.
- **Contract management tools:** smart contract and legal document drafting tools and platforms enabled by the combined use of algorithms with embedded AI and legal databases. Some services also include real-time drafting and tools to manage and store contracts.
- **Security management tools:** block-chain-based solutions to ensure privacy, strong cybersecurity and confidentiality of documents and data. Some tools also assist in compliance with regulations (*Eg.* Popi act) and provide support with reports in case of cybersecurity incidents.

**1. Are you aware/ familiar with these technologies? Please include/select all the corresponding options.**

**Table 8: Findings, Part 1, Q1 - Technological Awareness**

| Options/Tools | Yes | No | Prefer not to answer | Total |
|---|---|---|---|---|
| **Practice Management** | 90,9% | 9,1% | 0% | 100% |
| **Contract Management** | 90,9% | 9,1% | 0% | 100% |

| Options/Tools | Yes | No | Prefer not to answer | Total |
|---|---|---|---|---|
| **Security Management** | 54,55% | 36,36% | 9,09% | 100% |

**2. Does your law firm currently use, one or more of these technology solutions mentioned above? Please include/select all the corresponding options.**

**Table 9: Findings, Part 1, Q2- Technological Adoption**

| Options/Tools | Yes | No | Prefer not to answer | Total |
|---|---|---|---|---|
| **Practice Management** | 63,64% | 36,36% | 0% | 100% |
| **Contract Management** | 54,55% | 45,45% | 0% | 100% |
| **Security Management** | 36,36% | 54,55% | 9,09% | 100% |

Regarding awareness, almost 91% of the small law firms are familiar with the existence of technology tools of practice management and contract management for assisting in their daily practices.

However, these numbers show a significant decline intheir adoption inside these companies, since only 63,64% and 54.55% deploy practice and contract management tools, respectively, within their firms.

The results also showed a much smaller awareness by the SLF regarding security management tools, with only 54,55% responding that they already knew about their existence. Logically, the overall adoption of this tool was impacted by this fact, with only 36,6% of them deploying this technology in their firms.

The results also reveal that small law firms prefer to adopt technologies to improve their overall management of data and legal processes over guaranteeing the cybersecurity of their businesses and the management/drafting of contracts.

70,01% of the small law firms were aware of the existence of practice management technologies and adopted these in their firms. The same comparison regarding security management tools showed a percentage of adoption by the SLF of 66,65% while this number dropped by 60% in the case of contract management tools.

### 4.4.1 *Sub-category 2: Perceived Value*

PART 1

Considering the current situation of your law firm:

**3. What do you perceive as the advantages/disadvantages when utilizing the technologies available at your law firm? Please describe the main ones that come to mind.**

PART 2

**2. What benefits do you believe can be derived for a law firm that is digitally transformed, and deploys technology in alignment with its business objectives? Please describe.**

| |
|---|
| *Participant A: "Kind of like a transition from a horse to a car"* |

The answer of participant A illustrates well the general position of the legal practitioners in SLF, that see new technologies mainly as tools for assisting them in their overall tasks and activities.

Therefore, most of the occurrences were in themes related to benefits in aspects of work such as (1) time saving, (2) increase in productivity, efficiency effectiveness, and (3) positive effects on the quality of work and services.

To a minor degree, (1) reduction of costs and errors (2) more accessibility, and (3) their capacity to facilitate teams to collaborate and to share information, were additional advantages highlighted by the volunteers.

As unique views, one participant mentioned the possibility of being a leader in the profession with respect to the possible benefits of combining technology adoption

with their business objectives. Another respondent said that technological adoption could improve client retention.

Finally, one respondent said he did not see many advantages regarding TA in his law firm.

A summary of the findings regarding the perceived value of small law firms with technological adoption is described in Table 10.

**Table 10: The perceived value of TA by SLF of SA**

| Themes | Example(s) | Number of occurrences |
|---|---|---|
| **Speed & time saving** | • "How it can speed up my work",<br>• "Time-saving",<br>• "Work can be produced much faster." | 8 |
| **Productivity, efficiency & effectiveness** | • "…resolve client's problems efficiently",<br>• "…improve productivity",<br>• "… more effective service."<br>• "May optimize efficiency in respect of locating documents and storage…" | 7 |
| **Convenience & quality of service** | • "Convenience …"<br>• "Professional service."<br>• "More appropriate or advanced tools cater for customization and integration with other non-legal tools as well as automated template update capturing new legislation…<br>• "…. easier to draft" | 7 |
| **Decrease in errors & costs** | • "Cost-saving"<br>• …" few errors occur"<br>• "…. accurate submission of legal documents…" | 5 |
| **Accessibility & Collaboration** | • "The ability to work together in teams, share information…"<br>• …" it can have multiple people in the firm access the document at any time." | 4 |
| **Others** | • "Lead the process to digitize the profession itself." | 2 |
| **No benefits** | • "Not much" | 1 |

### 4.4.2 *Sub-category 3: Inhibitors/ Challenges*

PART 2

**4. If your organisation is at the "beginner" or "intermediate" phase, what factors do you believe may be preventing the effective adoption of the existing technologies by your law firm, or are currently preventing it from introducing new ones**

**5. If your organisation is at the "advanced" phase, please describe what factors you believe would contribute to making the implementation of new technologies at your law firm seamless and effective?**

The legal practitioners of small law firms who believe their companies were at the beginning or in the intermediate stage of the digital transformation process, pointed to financial constraints as the main factor inhibiting them to enhance their TA.

Another set of difficulties for technology adoption pointed out by the volunteers involved the implementation and maintenance of the platforms that support the new technologies.

Under this umbrella, the participants mentioned challenges such as (1) lack of knowledge regarding the technologies available, and (2) not being able to select which technology is adequate for application in their law firm.

Moreover, structure issues related to (1) lack of individual skills to operate the platforms (2) the necessity of constantly updating them, and (3) reservations related to cybersecurity, are also acting as impediments against the diffusion of technology adoption in the legal private market of South Africa.

The remaining respondents reported that at these stages of the digital transformation process they believe that (1) they don’t need to adopt new technologies just yet as (2) they don’t see it as worthwhile for their particular case, or (3) are suffering from a resistance to change from the more senior practitioners.

From another perspective, all the participants who believe their law firms are in the advanced stage of the digital transformation journey mentioned that staff training is a key element to facilitate TA amongst their companies.

A summary of the findings regarding the inhibitors of TA for SLF in SA is described in Table 11:

**Table 11: Inhibiting factors for TA by SLF of SA**

| Themes | Example(s) | Number of occurrences |
|---|---|---|
| **Financial constraints** | • "Funds",<br>• "Financial constraints",<br>• "Cost to the company" | 5 |
| **Implementation and maintenance of the platforms** | • "The choice of platforms and integration/communication with other platforms",<br>• "…individual skills to operate the platforms",<br>• "… the risk of interference/hacking." | 5 |
| **Lack of need/ Not worth it /Resistance to change** | • "We don't believe we need to go there as yet."<br>• "Adoption by more senior practitioners…"<br>• "…the price is not worth the results…." | 4 |

## 4.5 Results Category 2: Digital Transformation (DT) and Digital Maturity (DM)

### 4.5.1 *Sub-category 1: Awareness*

PART 2

Please examine and consider the following definitions which pertain to the following questions:

- **Technological Adoption:** technologies applied to create, support, and improve internal operations, business models, services, and products offered in the market.

- **Digital Transformation:** is the process regarding "(…) *all organisational change efforts in response to technological disruptions, that results in a marked change in the form and nature of the organisation, especially so that the organisation's ability to thrive in the digital age is improved"* (Armstrong & Lee, 2021, p. 514)
- **Digital Maturity**: *"It is a measure of where an organisation is on its digital transformation journey."* (Armstrong & Lee, 2021, p. 544)

**1. How familiar are you with the concepts of "digital transformation", "digital maturity" and "technological adoption"?**


**Figure 10: SLF awareness: DT, DM, and TA concepts.**

> *Participant C: "Digital legal transformation is the current and future way of enhancing the professional service rendered to a firm's client and not a deterrence to the legal practitioner, but an enabler of professionalism."*

Although there exists a percentage of legal practitioners already aware of the importance of digital transformation in the context of the SA legal market, Figure 10 demonstrates that this vision is not yet shared by the majority of the small law firms.

54.6% of the respondents, after being exposed to a simplified explanation of the terms digital transformation (DT), digital maturity (DM), and technological adoption (TA) recognize themselves as being completely unaware of these or

having a superficial understanding of the topic. Further, only 18,2% of them consider themselves as having a deep understanding of these subjects.

Therefore, it can be concluded that a lack of knowledge is a key factor inhibiting small law firms from initiating or continuing their digital transformation journeys, jeopardizing their capacity to obtain higher levels of digital maturity within their organisation.

Based on these numbers, it can also be concluded that a lack of awareness is also an important impediment regarding further technological adoption by SLF of South Africa, even if not that evident for the participants when asked directly about this topic.

#### 4.5.1 *Sub-category 2: Digital Maturity (DM) Self-assessment*

PART 2

Literature provides various ways to classify where a company is positioned in its digital transformation process. This study adopts a simplified version, comprised of three phases:

- **Digitisation (Information):** Organise and digitise information.
- **Digitalisation:** Streamline and automate processes.
- **Digital transformation**: Institutional culture change and reskilling of workforce.

**3. Considering the difference between the concepts of "digitisation", "digitalisation", and the classification defined above, in which phase of the digital transformation process do you believe your law firm currently is?**

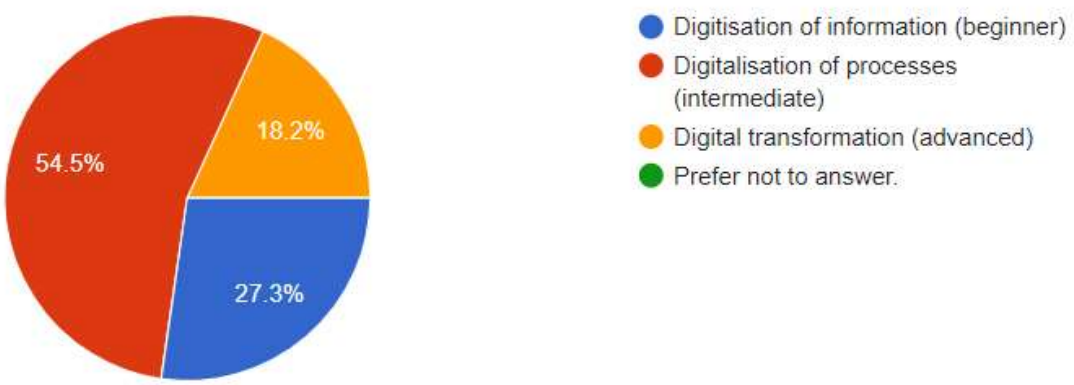


**Figure 11: Self-assessment: DM of SLF**

Figure 11 shows that 81,8 % of the participants classify their small law firms as being at the beginning, or the intermediate phase of their digital transformation journey, revealing that the vast majority of SLF in South Africa still had a long way to go to achieve an advanced level of digital maturity.

Nearly 30% of the respondents believe that their law firms are beginners when it comes to DT and TA. In practical terms, this implies that these companies usually only transition their files and documents from physical to digital format with minimal changes to their structure or internal processes.

While 54,5% of the respondents affirm that their companies were able to surpass this initial phase and be somewhere between starting and mastering the utilization of new technologies as tools for optimizing their activities. An illustrative example of this phase would be a law firm that utilizes AI for automating repetitive tasks.

Finally, only 18,2% of the firms fully explored the possibilities opened by applying new technologies to completely overhaul their internal processes and the way their products and services are provided for clients/users.

## 4.6 Results Category 3: Market Trends

### 4.6.1 *Sub-category 1: Covid-19*

PART 1

**4. How did Covid-19 change the way the legal services are provided in your law firm if at all? Do you believe these changes will continue post-Covid-19?**

Most of the legal practitioners interviewed affirmed that their working activities were impacted by the event of the Covid-19 pandemic, with the biggest changes relating to remote forms of communication.

(1) Online consultations with clients, (2) virtual court attendances, and (3) remote court processes were introduced to their small law firms or had a significant increase after the beginning of the pandemic in South Africa.

Working from home was another adaptation directly linked by the participants with this pervasive event. Moreover, while opinions varied among the respondents regarding if these changes were for the better or worse, the majority agreed that they were here to stay.

Table 12 summarises the findings and emergent themes linked with this topic.

**Table 12: Market Trends: Perceived Impact of Covid-19 by SLF of SA**

| Themes | Example(s) | Number of occurrences |
|---|---|---|
| **Online/ remote communication with clients** | • "We have adapted to online consultations in certain circumstances and….",<br>• "We have far less physical contact with clients. Mostly we use Teams" | 6 |
| **Online/ remote communication with the court** | • "Had to adapt to virtual court attendance."<br>• "Introduction to remote court process…"<br>• "Court proceedings conducted through technology." | 6 |
| **Working from home** | • "We have been working from home" | 3 |

| Themes | Example(s) | Number of occurrences |
|---|---|---|
| **No changes** | • "Not much." | 1 |
| **Changes will continue** | • "Yes, I believe these changes are here to stay."<br>• "Yes these changes will continue past Covid-19" | 5 |
| **Changes will not continue** | • "No" | 1 |

#### 4.6.2 *Sub-category 2: Digital Disruption (AI)*

PART 2

**6. Would you like to add/share any additional information about the topics discussed during this interview?**

PART 1

**5. Imagine a scenario where new technologies such as AI and machine learning dramatically modify the way legal services are provided in SA. How do you believe your law firm would deal with disruptions due to new digital trends and innovations?**

Regarding the perceived risk of the participants of being disrupted by the introduction of new technologies in the SA legal market, the respondents presented divided opinions.

> Participant B: "I doubt it would affect anything. Machine Learning does not equate to human interaction…I monitor developments but believe so far AI in law is exaggerated.

Approximately half of the legal practitioners that participated in this research project presented answers more aligned with the position illustrated by participant B above.

This group believes that, although AI provides a great supporting tool for legal practitioners, the nature and complexity of their work would make it very unlikely for AI to completely substitute humans in positions such as attorneys or lawyers.

One participant stated a more moderate approach, recognizing the possibility of AI playing a role that usually involves more repetitive tasks, such as paralegals and typists, and thinks these roles could become obsolete.

The second major group had a different position, saying that they believe technology is constantly evolving, and, so they would need to cope and adapt to this new reality. Some of the respondents comprising this group even mentioned taking measures such as (1) studying and (2) promoting training to better understand these technologies and how they operate.

Table 13 briefly summarises the number of occurrences and the different positions amongst the respondents mentioned above.

**Table 13: Market Trends: Digital disruption (AI) in SA legal market**

| Themes | Example(s) | Number of occurrences |
|---|---|---|
| **AI and new technologies won't have the capacity to substitute the work of lawyers** | • 'AI looks to find a single right answer when in reality the legal answer may not be the correct client solution",<br>• "…technology and AI lack the EQ and strategy thinking when formulating documents or providing legal services" | 7 |
| **AI as the only automation and support tool** | • "AI can emulate but not innovate…"<br>• "…Regarding contracts my experience shows that AI is nothing more than ramped up Search and Replace function"<br>• "Mostly digital trends involve automation of tasks…" | 4 |
| **AI won't affect dramatically the legal market** | • "Won't affect me" | 5 |
| **Adapt to the change** | • "We will cope"<br>• "Adapt" | 4 |
| **Invest in learning and training** | • "Ensure we understand it and how it operates" | 2 |
| **AI will make some positions in the legal market obsolete** | • "Yes. Many jobs like paralegals and typists will become obsolete." | 1 |

## 4.7 Summary: Interview findings

The findings of the interviews show that the majority of SLF are aware of the new technologies and platforms available in the market.

This is true to a larger degree when considering the practice management and contract management tools, with 90,9% of the firms being familiar with them.

However, this number dropped quite significantly when compared with the adoption by these companies, since only 63,64% of them deploy practice management tools and 54,55% of them currently make use of contract management technologies in their activities. There are several factors uncovered by the interviews that could contribute to the occurrence of this phenomenon.

The first was the limited vision of the legal practitioners regarding the possibilities of value creation with the deployment of the new technologies of the 4IR. These reach far beyond their current uses by small law firms. The second factor is low awareness of the concepts of digital transformation, digital maturity, technological adoption, and the potential of the combined application of these processes to achieve overall superior business results. This low awareness is likely negatively impacting the digital maturity levels of the SLF within SA as 81,8% of the participants classify their companies as being somewhere between beginners and intermediate with respect to their digital maturity.

The research also found that a significant percentage of companies do not see value in increasing their investment in TA, finding it rather as a financial burden for their companies. This encourages them to keep using simpler tools already in place that although not as convenient or effective, are still sufficient to fulfil their immediate needs at a lower cost.

Other inhibitors directly pointed out by the respondents that are inhibiting further technological adoption by SLF are the difficulties related to (1) choosing an adequate platform, (2) implementing, and (3) maintaining it.

In terms of market trends, nearly half of the participants considered it important to respond and cope with possible changes that the new technologies and

particularly AI may bring. The other half do not recognize the disruptive potential of the new technologies, believing that they will present little or even no effect at all on the way their services are being provided.

Finally, the overall reactive culture embedded in the legal environment was seen in their response to the disturbances generated by their reactions to the global Covid -19 pandemic.

# CHAPTER 5. DISCUSSION OF RESULTS

## 5.1 Introduction

This chapter presents the discussion of the findings presented in Chapter 4 from a different perspective by contrasting them with the propositions of Chapter 2.

Considering the proximity of some of the themes related to the statements, this comparison will be made in conjunction with the analysis of some of the propositions. Figure 12 summarizes the framework that will be utilized as a basis for this comparison.

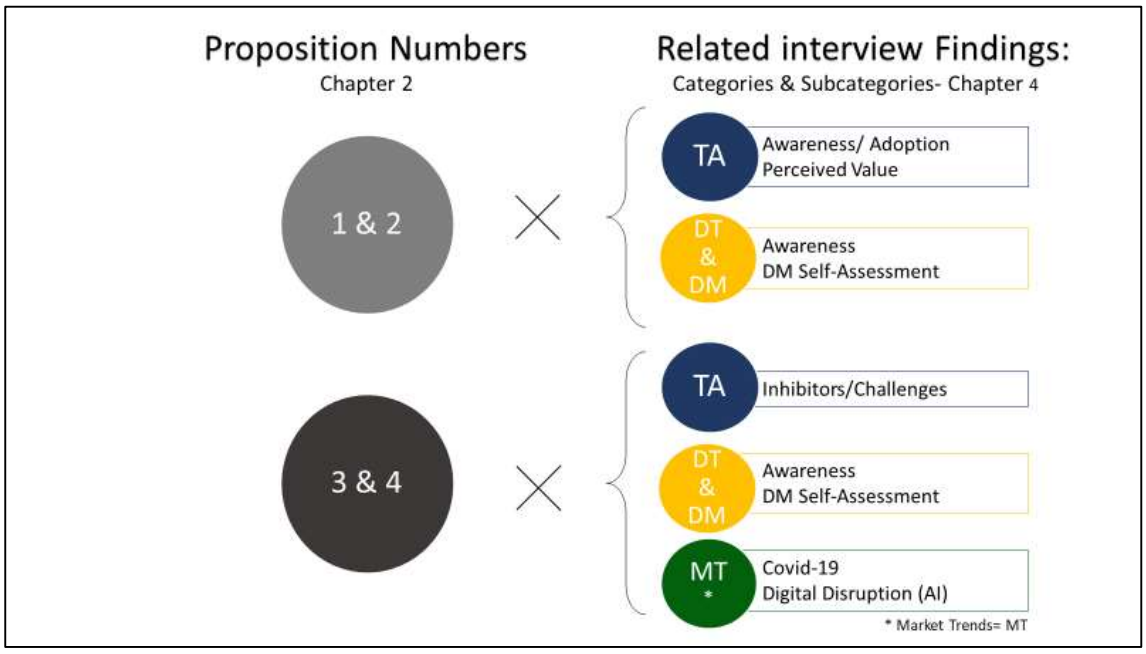


**Figure 12: Comparative Analysis Framework: Research proposition vs Interview findings.**

In addition, the research will correlate these discussions with the theoretical framework adopted, referring to the literature reviewed in the study whenever sufficient.

This form of analysis aims to provide a practical approach to the findings by exploring how well the propositions, based on academic research, relate to the

topics under investigation with respect to the reality of the small law firms of South Africa.

## 5.2 Results pertaining to propositions 1 and 2

**Proposition 1:** Strategic TA can increase the value of products and services in the legal environment showing significant increases in business results. Legal providers that effectively deploy technology are outperforming the TLF including metrics such as (1) efficiency, (2) competitive advantage, (3) profitability, and (4) market value.

**Proposition 2:** For law firms to obtain the maximum value that can be created for their business is not enough for TLF to merely apply the new technologies to their current business models. The TA must be done in conjunction with the business management principles of DT to increase their levels of DM.

The research was not able to identify a direct correlation between propositions one and two, stated above, and the benefits experienced by small law firms when adopting new technologies, based on the data gathered via the interviews.

Regarding proposition one, this occurred because most of the small law firms have very limited technological adoption and are currently at beginner to intermediate levels of digital maturity. Even when considering those that do invest in new technologies, they generally apply it in a dissociated manner, separate from their overall business objectives, utilizing it as supporting tools for their staff and internal management of simple tasks and data management.

Therefore, the metrics achieved by these companies are mainly restrained to optimization of internal processes, or in “how the SLF do business”, according to the classification of Armstrong and Lee (2021, pp. 30-31).

The minority of the respondents mentioned perceived or an envisioned possibility of obtaining benefits with TA that could encompass other areas such as “the creation or enhancement of services” already offered by these companies to the market (Armstrong & Lee, 2021, pp. 30-31).

From another point of view, it can be argued that this phenomenon may indirectly prove to some extent that proposition two can be extrapolated to the SA legal industry. Since the absence of more robust business results derived from

technological adoption by the SLF may be a sign that the literature is correct (Armstrong & Lee, 2021, pp. 519-522; Westerman et al., 2014, p. 4), it is necessary to deploy them in combination with a DT process to enable leveraging of the full range of benefits that these tools bring.

## 5.3 Results pertaining to propositions 3 and 4

**Proposition 3:** The traditional law sector is lagging when it comes to technological adoption mainly due to a lack of knowledge and resistance to change. This is creating the opportunity for the earlier adopters and new entrances to disrupt the market.

**Proposition 4:** Despite having a unique background, the literature so far shows that the legal sector of South Africa has similar trends as seen globally regarding TA and its business structure.

Proposition 3 mentions the trends related to TA in the legal industry and their inhibitors from a global perspective. While Proposition 4 indicates that the South African legal market follows similar tendencies.

Considering the correlation between both statements, the research will analyse these propositions together, based on the results from the interviews as described in Figure 13 dividing them into two aspects:

- Assessing if small law firms are lagging when it comes to TA.
- Verifying if the current primary inhibitors of technological adoption for small law firms in South Africa are a lack of knowledge and resistance to change, by comparing this statement with the related results from the interview analysis.

### 5.3.1 *Proposition 3 and 4: Technological Adoption by SLF in SA*

. *Participant D: "…Just remember the law lags rather than lead, most things!"*

As illustrated by the feedback of the respondent above, in general, the small law firms of South Africa recognize their reactive response when it comes to technology adoption, and that they have a long journey ahead until they reach digital mastery (Westerman et al., 2014, p. 4).

This is confirmed by the awareness and self-assessment exercise performed by the respondents during the interviews.18,2% of the participants affirmed that this was the first time they heard about the concepts of DT, DM, and TA, while 36,4% affirmed having a very basic understanding of these subjects.

The data reflected that a large percentage of legal practitioners within companies access their digital maturity levels as either beginners (27,3%) or intermediate level (54,5%).

Regarding the self-assessment exercise performed by the respondents, it is worth mentioning once more that the definition of each of the levels as made by the research was simplified, as exposed in Chapter 4.5.1. This was done to enable all participants to provide feedback regarding the position that they believed their law firms would fit into in terms of their digital maturity. However, as a trade-off, this characteristic also made it difficult for the research to provide a more detailed analysis of the nuances within each level which could be particularly high in the intermediate phase of the digital transformation. Taking these factors into account, it is very likely that the number of intermediate-level companies is lower, and the beginner level companies are higher than the ones reflected by the participants.

This shows that the first part of Proposition 3 is correct and that the private legal sector of South Africa is lagging when it comes to technology adoption since studies point out that more than 80% of SA law firms are classified as small (Law Society of South Africa, 2019; LSSA, 2021). Finally, this also confirms, in practice, the points made by Rogers (2010) and the applicability of his theory in the context of SLF of SA.

Since a small number of employees form these companies, they, accentuate the importance of individual adoption, particularly from top management to allow diffusion of the use of new technologies inside these organisations.

### 5.3.2 *Proposition 3 and 4: Inhibitors of Technological Adoption by SLF in SA*

The second part of proposition 3 states that a lack of knowledge and resistance to change are the main inhibitors of technology adoption amongst small law firms in South Africa.

According to the summary of the findings described in Chapter 4.7 and the answers relating to awareness and market trends provided by the participants during the interviews, it is possible to infer a positive link between the third statement and the reality observed in the SA legal industry.

As the interviews indicated, legal practitioners generally lack knowledge around topics such as: (1) what technologies are available, (2) what benefits they could bring to their companies, and (3) what are the risks inherent to the organization if they adopt these technological strategies or not.

A factor that inhibits the TA itself, since many authors believe that it is essential for the successful outcome of any change, including technological adoption (Westerman et al., 2014), that the company has (1) a clear vision regarding why they should do it, (2) and a sense of urgency related to this process. (Garvin, 2003; Jick, 1993; Kotter, 1995).

Without these elements, it is easy for small law firms to perceive the technology adoption as unnecessary and/or that it does not compensate for the effort and investments required.

This point is very much aligned with TAM theory regarding technological adoption (Davis, 1989). The use of new technologies and the value they create is seen to diminish as their perceived ease of use and usefulness arebeing reduced due to a lack of knowledge. In addition, the lack of knowledge and its aforementioned effects, are likely to foster this resistance to change, by reinforcing the conservative culture embedded in this industry.

This type of culture has been present since the formation of legal professionals (Janeček et al., 2021) and is retained within the SA legal environment and its

institutions (Bonnin, 2019; Dereymaeker, 2016; Klaaren, 2020) as the industry remains constrained and self-regulated, as briefly covered in Chapter 2.4.3.

Moreover, the high levels of resistance to change inside this segment are evident when contrasting the findings related to the market trends affected by Covid-19, for example. Many legal practitioners interviewed described that their companies implemented changes such as (1) the possibility of working from home, and (2) the increase in the use of remote communication channels between the clients and the court.

Therefore, innovations in their legal activities that are limited to the absolute necessary adaptations to deal with the disturbances related to the pandemic, and/or motivated by pressures of external agents such as (1) changes in the legal court procedures (2) and client's demands.

## 5.4 Summary: Proposition Statements vs Interview findings

Based on the interview findings it was not possible to find a direct correlation between Propositions 1 and 2 and the reality of small law firms in South Africa, as many of the law firms analysed have low levels of TA, and those who have already invested and deployed technological adoption in their firms are not benefiting from the full range of benefits outlined by researchers within the field.

However, considering that the interview did not have access to a significant number of companies that utilize these new technologies in conjunction with high levels of digital maturity, it is likely that these statements may be valid by an indirect assessment.

Regarding propositions 3 and 4, according to the analysis above it was possible to deduce a positive correlation between these statements and the current situation of the private legal industry of SA. The small law firms of South Africa are following global trends and lagging concerning technological adoption mainly due to a lack of knowledge and resistance to change.

Moreover, the research also complemented these findings by demonstrating that legal practitioners are usually unaware that these factors are the root cause

underlying their low levels of TA. This provides answers as to why most of them pointed to secondary factors and difficulties to justify the perpetual use of older and more familiar, albeit inferior technologies.

Finally, the conclusions pointed towards a high probability that these underlying factors work in conjunction to create and maintain a loop that ensures the *status quo* currently seen within the South African legal environment.

# CHAPTER 6. CONCLUSIONS

## 6.1 Introduction

The research was conducted to address the problem as described in Chapter 1.3 to better understand the underlying causes and inhibitors of the traditional small law firms of South Africa regarding their technology adoption and digital transformation processes. Then, based on the findings, the research aimed to provide recommendations and assistance for these companies regarding their specific challenges that are inhibiting the modernization of their business models and furthering their technological adoption.

To achieve these tasks, the research was structured around finding answers to the four questions stated in Chapter 1.4 and involved the investigation of these questions by combining the academic perspective and practical observations of these companies by interviewing practitioners that work within these organisations.

Chapter 6 concludes this investigation by summarizing the results regarding each of these questions and shows the general business management principles and frameworks that have the potential to assist these companies based on the findings.

## 6.2 Conclusions of the research questions

### 6.2.1 *Question 1:*

***What is the value that can be derived from the effective adoption of technology in the legal environment?***

The research revealed that currently, small law firms in South Africa are experiencing an increase in efficiency, savings in time and costs, and reducing

errors with technological adoption. Other advantages mentioned by the participants included more accessibility, greater convenience, and facilitating teams to collaborate and share information. All these benefits relate to the optimization of the daily activities of legal practitioners.

This provides a coherent result since most of the participants indicated that their law firms utilize technology in a restricted manner, mainly to support their staff as a tool for optimizing documentation and information management, and for repetitive tasks.

Therefore, the potential benefits of the deployment of TA described in the literature (Fitzgerald et al., 2014; Grebe et al., 2018; Westerman et al., 2012) such as increases in (1) customer retention, (2) profits, and (3) competitive advantage, are not a reality for the majority of SLF of South Africa. Furthermore, most of their staff are not even aware of this possibility. This scenario indicates a high likelihood that SLF needs to invest in technologies in conjunction with a digital transformation process to leverage the full benefits of the technological adoption, enabling innovation, and adding more value to their service provision.

However, due to the low levels of technological adoption and digital maturity seen in most law firms the research was unable to prove by the observations the direct correlation of these concepts.

### 6.2.2 *Question 2:*

***What are the main constraints for TA and the modernization of business models of SLF of SA?***

Legal practitioners indicated financial constraints amongst other challenges regarding the implementation and management of new technologies as the primary factor inhibiting their adoption. A considerable portion of the respondents stated that they don't see the need to adopt new technologies. Some of the respondents even pointed out that it was not worth the investment of resources required to deploy them.

However, considering the overall analysis of the data gathered during the interviews, the research confirmed that the (1) lack of awareness and overall (2) resistance to change are the most important underlying factors inhibiting TA amongst small law firms in South Africa. Therefore, these results confirmed the tendencies of both global and local literature that also pointed to these factors as the main inhibitors of the modernization of the legal industry (Brooks et al., 2020; du Plessis, 2011; Du Toit, 2005; Simpson, 2016).

Concluding, the research also did not exclude the existence of a relationship between these two inhibitors, with the lack of knowledge further supporting the resistance to change and possibly creating a loop that maintains the status quo of the SA legal industry. This situation is favoured by the fact that this environment is mostly self-regulated as described in Chapter 2.4.3.

### 6.2.3 *Question 3:*

***Which business management principles can be deployed to surpass constraints, and increase the adoption of the new technologies in the legal environment?***

Based on the previous findings, it is possible to affirm that small law firms in South Africa need to create and follow a deliberate digital transformation process involving all areas of the organisation.

To increase the chances of success according to the theoretical framework utilized in this research (Armstrong & Lee, 2021; Westerman et al., 2014) it is advisable that this process:

- Starts with the "emotional conversion" of the majority, if not all, members of staff. It is essential at this stage to have the buy-in of the top decision-makers and owners who are often more resistant to change.
- Is based on a unified vision, created in alignment with the purposes and objectives of the company, as described by Armstrong and Lee (2021, p. 519): "*(…)In other words, digital transformation results in the organization being able to achieve its strategic objectives. "*

- It is vital that the vision is followed by a realistic step-by-step pathway for its application and include staff training.

It is suggested that the use of the digital transformation compass by Westerman et al. (2014), as summarized in Figure 13, is applied to these tasks.

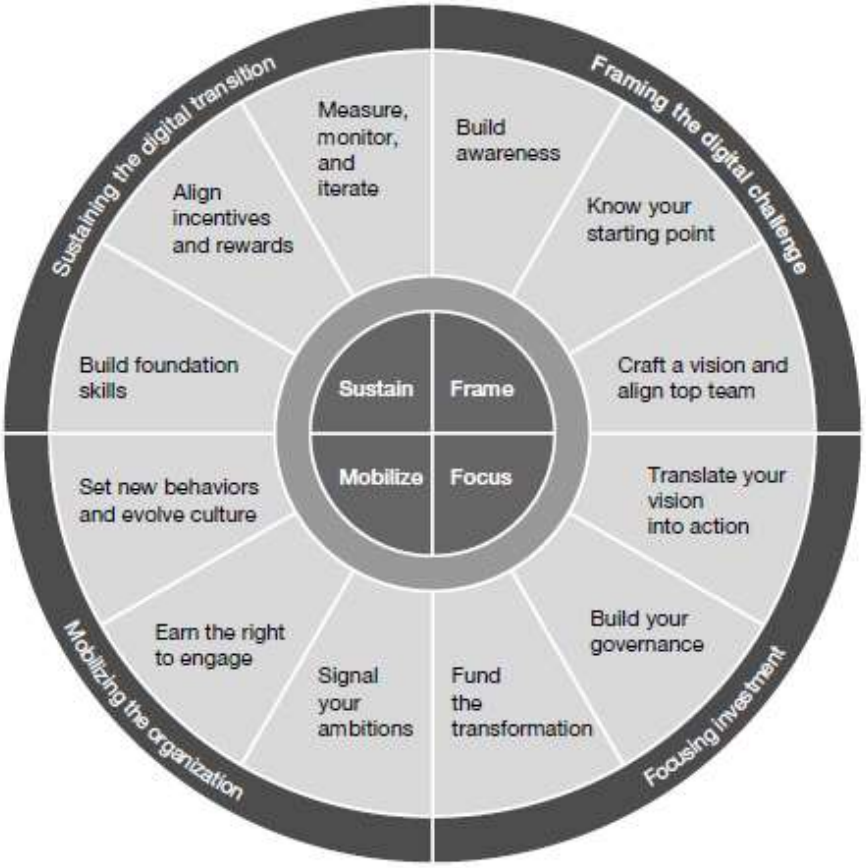


**Figure 13: The digital transformation compass.**

**Source: Westerman et al. (2014, p. 174)**

Westerman et al. (2014) framework present advantages over other traditional change management frameworks (Garvin, 2003; Jick, 1993; Kotter, 1995) as it was designed to assist companies in digital change management by addressing the challenges related to culture and internal barriers to the digital transformation process.

This framework is comprised of four clear phases: (1) framing the digital challenge, (2) focus investments, (3) mobilizing the organization, and (4) sustaining the digital transition.

A detailed analysis of the levels of each of those phases, its potential gaps, and thorough descriptions regarding how they could be applied by the small law firms of South Africa goes beyond the scope of these general suggestions.

However, it is worth mentioning that phases 1 and 3 of the digital transformation compass could be particularly relevant for the small law firms of South Africa. This is due to their potential to assist these companies to overcome their main inhibitors of technological adoption (1) the lack of knowledge, (2) and resistance to change, as outlined in the brief description of these phases made by Armstrong and Lee (2021, p. 538):

***1.*** "***Frame the digital challenge:*** *Build awareness of the need for change, of digital opportunities and threats. Establish the starting point and assess the organization's digital maturity. Craft a vision and ensure the top teams are aligned to it. (…)*
***2.*** *(…)*
***3.*** ***Mobilize the organization:*** *Communicate and illustrate the vision, ambitions, and sense of urgency. Build momentum and engage the workforce. Set new behaviours and start evolving the organization towards a more innovative culture." (…)*

Finally, the study found that some points discussed by Michalakopoulou et al. (2021) provide interesting insights, that could also assist south African legal practitioners regarding **how** to implement the digital transformation compass:

- Rethink and adapt some aspects of the law school education to promote a better correlation between their content and the real-world demands of the legal profession practice. Short-term courses, workshops and webinars promoted by universities and other legal associations/organizations could also be beneficial as a first step to increase the awareness and sense of urgency related to these topics to lawyers and attorneys at a lower cost and without compromising too much of their daily time.
- Promote knowledge sharing and communication inside the legal environment and between other stakeholders.
- Promote multidisciplinary training, especially amongst the attorneys and lawyers that fill leadership roles, as well as the development of hard and

soft skills to *"maximize their engagement with innovation-building activities." (*Michalakopoulou et al., 2021, p. 13*)*

- Less regulatory restrictions for the creation and promotion of a culture change inside law firms that is more flexible and enables innovation, under a formal and statistical plan that evolves continuous improvement and incremental changes in the business environment.

Regarding the last point, Michalakopoulou et al. (2021, p. 13) commented on the importance of integrating all members of the organization to achieve this cultural change inside traditional law firms:

*"(...)innovation, in any of its forms, should not be applied in isolation or as a monoculture; it must be approached as a holistic and multi-layer philosophy of thinking and acting for continuous improvement and change in the whole business environment from the top, the management, the daily routine of employees, to the bottom, how the operations run, level (...)Law providers must also recognize the pursuit of incremental innovations formally in their innovation strategies and define formal processes for implementing these types of innovation."*

#### 6.2.4 *Question 4:*

***What are the limitations or adaptations necessary when using these management principles, considering this industry and the context of SA?***

Considering the content covered in Chapter 4.6 and the discussions in Chapters 2.4.3 and 5.3 above, the research elucidated similar trends and inhibitors for technological adoption in the South African legal industry as those observed in other parts of the globe. Therefore, there is no need for any specific adaptation of these business management principles for the South African private legal market.

However, this does not exclude the necessity of applying the general business frameworks and principles suggested taking into account the characteristics and necessities of each traditional small law firm such as (1) level of technological adoption, (2) level of digital maturity, (3) internal culture and organization, (4) business objectives, (5) available resources, and talent, (6) amongst others.

## 6.3 Suggestions for future research

Although some researchers explored TA, DT, and DM in the context of South African law firms (du Plessis, 2011; Du Toit, 2005; Naicker, 2017), these subjects are largely unexplored fields. This research aimed to stimulate the expansion of these discussions.

Therefore, future studies utilizing a different population, for example, medium and large law firms, and/or different types of design and approach, such as case studies, could work to enrich the knowledge regarding these subjects. Other potential topics might include exploring gaps, limitations, and assumptions of this research, as well as delving deeper into the findings and the possible relationships between them. Moreover, it is very likely that with the increase in the interest in the analysis of these themes, new study areas could emerge that are currently unknown.

# APPENDIX (A) Information Sheet: objectives, confidentiality, and general information

The purpose of the interview is to collect primary data for a research project undertaken by Veronica Di Monaco and supervised by Prof. Rene Pellissier as part of a Master's dissertation in the field of Digital Business at the Wits Business School, Johannesburg.

The research is academic and aims to study the extent of digital adoption by law firms and investigate aspects that may be hindering the further adoption of new technologies in the private legal sector of South Africa.

Participation is confidential and anonymous, no information regarding the respondent or the respondent's law firm will be shared. The data collected will be deleted after the completion of its analysis.

The questions are designed to assess the perspectives and opinions of the participants regarding the topic, according to their personal experiences. Therefore, the questions have no right or wrong answer, and it is encouraged that the participants express their honest opinion when providing their responses.

To maintain ethical and non-biased standards according to the policies of the Wits Business School, participants should note that they voluntarily choose to participate and that their participation implies no personal or direct benefits.

There is also no punitive action if you choose not to participate or if you withdraw from the study. You may also withdraw at any given time during the interview and choose not to answer any questions if you do not want to by choosing the corresponding answer or typing the option "Prefer not to answer".

This study will be compiled as a research report. If you wish to receive a copy of the summary of this report, I will gladly share it with you.

Participants are welcome to contact the researcher at the following email address:

(contact information about the researcher and the University Human Research Ethics Committee)

# APPENDIX (B1) Consent Form – Interview in Questionnaire Format

Name (participant):_____

Date:_____

1) I confirm that I have read and understood the information sheet above provided by me by the researcher and consent to participate in this research:

__ YES

__ NO

2) Regarding my participation, I also agree with the following:
(Please check the relevant options below.)

__ I consent to the researcher using anonymous quotes in her research project.

__ I agree and authorize the researcher to contact me after my participation extending the consent of the use of information provided by this research, if necessary, for other purposes not previously covered in this consent form.

__ None of the above.

# APPENDIX (B2) Consent Form – Interview in the online format

**Title of project:** Digital adoption by small law firms in South Africa: Challenges and Opportunities
**Name of researcher/interviewer:** Veronica Di Monaco
**Academic institution:** The University of the Witwatersrand – Johannesburg

Name (participant):_____

Date:_____

(Informational Sheet – please check Appendix A)

**DECLARATION:**

I confirm that I have read and understood the information sheet above provided to me by the researcher regarding my participation, and I agree with the following: (Please complete the relevant options below)

1- I consent to participate in this research project.

__ YES

__ NO

2- Regarding my participation, I also agree with the following:
(Please check the relevant options below.)

____I consent to the researcher using anonymous quotes in her research project.

___ I consent to the interview being recorded.

__ I consent to the information I provide being used and stored for academic research purposes related to this project and that all data collected will be deleted after the completion of its analysis.

____I agree and authorize the researcher to contact me after my participation regarding extending the consent of the use of information provided by this research, if necessary, for other purposes not previously covered in this consent form.

____None of the above.

# APPENDIX (C) Instrument- Interview Guide

**Table 14: Interview guide**

| Interview Guide |
|---|

**PART 1- Current technology availability and practices**

Please examine the technologies defined below designed to assist law firms with the questions that follow.

- **Practice management tools:** platform service providers that assist with the infrastructure and management of law firms' daily activities. Including software to manage human resources, data, documents, finance, and communications with clients.
- **Contract management tools:** smart contract and legal documents drafting tools and platforms enabled by the combined use of algorithms with embedded AI and legal databases. Some services also include real-time drafting and tools to manage and store contracts.
- **Security management tools:** block-chain-based solution to ensure privacy, strong cybersecurity, and confidentiality of documents and data. Some tools also assist in compliance with regulations (*Eg.* Popi act) and provide support with reports in case of cybersecurity incidents.

1. Are you aware/ familiar with these technologies? Please include/select all the corresponding options.

☐ Practice management tools
☐ Contract management tools
☐ Security management tools
☐ Prefer not to answer

2. Does your law firm currently use, one or more of these technology solutions mentioned above? Please include/select all the corresponding options.

☐ Practice management tools
☐ Contract management tools
☐ Security management tools
☐ Prefer not to answer

## Interview Guide

Considering the current situation of your law firm:

3. What do you perceive as the advantages/disadvantages when utilizing the technologies available at your law firm? Please describe the main ones that come to mind.

4. How did Covid-19 change the way the legal services are provided in your law firm if at all? Do you believe these changes will continue post-Covid-19?

Imagine a scenario where new technologies such as AI and machine learning dramatically modify the way legal services are provided in SA.

5. How do you believe would your law firm deal with disruptions due to digital trends and innovators?

### PART 2- Digital maturity and technology adoption

Please examine and consider the following definitions which pertain to the following questions:

- **Technological Adoption:** technologies applied to create, support, and improve internal operations, business models, services, and products offered in the market.
- **Digital Transformation:** is the process regarding "(…) *all organisational change efforts in response to technological disruptions, that results in a marked change in the form and nature of the organisation, especially so that the organisation's ability to thrive in the digital age is improved"* (Armstrong & Lee, 2021, p. 514)
- **Digital Maturity**: *"It is a measure of where an organisation is on its digital transformation journey."* (Armstrong & Lee, 2021, p. 544)

1. How familiar are you with the concepts of "digital transformation", "digital maturity" and "technological adoption"?

☐ Not aware, just heard about it now.
☐ I heard about it. I consider my knowledge to be superficial.
☐ I am familiar with it. I consider having a reasonable understanding of it.
☐ I am fully aware of it. I consider having a very good understanding of the topic.
☐ Prefer not to answer.

Literature provides many different ways to classify where a company is positioned in its digital transformation process. This study adopts a simplified version, comprised of three phases:

## Interview Guide

- **Digitisation (Information):** Organise and digitise information.
- **Digitalisation:** Streamline and automate processes.
- **Digital transformation**: Institutional culture change and reskilling of workforce.

2. What benefits do you believe can be derived for a law firm that is digitally transformed, and deploys technology in alignment with its business objectives? (Please describe)

3. Considering the difference between the concepts of “digitisation”, “digitalisation”, and the classification defined above, in which phase of the digital transformation process do you believe your law firm currently is?
(Please consider your answer to the following questions)

☐ Digitisation of information (beginner)
☐ Digitalisation of processes (intermediate)
☐ Digital transformation (advanced)
☐ Prefer not to answer.
☐ Other: _____

4. If your organisation is at the "beginner" or "intermediate" phase, what factors do you believe may be preventing the effective adoption of the existing technologies by your law firm, or are currently preventing it from introducing new ones?
(Please skip this question if it does not correspond with your previous answer.)

5. If your organisation is at the "advanced" phase, please describe what factors you believe would contribute to making the implementation of new technologies at your law firm seamless and effective?
(Please skip this question if it does not correspond with your previous answer.)

6. Would you like to add/share any additional information about the topics discussed during this interview?

Feedback:

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