

# **Artificial Intelligence in Swedish Law Firms**

## **From an Employee Perspective**

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## **Abstract**

The development of new technology is a continuous process that affects businesses and their operations. In present, we are in the midst of the so-called fourth industrial revolution due to rapid advancements in various technologies, such as artificial intelligence (AI). AI has turned out to be a reality for many business practitioners, where law firms are one type affected. Research show that the use of AI means new demands and opportunities for law firms, which in the end affect law firm employees. Through an abductive study with the use of semi-structured interviews, various law firm employees in Sweden have been interviewed. With the use of an extended Technology Acceptance Model this thesis presents findings that illustrate what causes law firm employees to develop acceptance towards the application of AI tools. Such acceptance is developed as a result of several conditions;

1. If the usage of AI tools result in time savings and quality improvements.
2. If the usage is effortless and the result produced by the AI tool is comprehensive.
3. If the risks with the usage are considered insignificant and if AI is considered a complement rather than a substitute of jobs.
4. If in-house R&D is conducted and hourly billing is avoided.
5. If homogenous and reoccurring agreements of large quantities exist.

The importance of achieving employee acceptance when implementing AI in law firms is outlined in this study. This thesis informs and advices law firms in implementing AI by presenting factors facilitating the development of employee acceptance.

## **Key Words**

Law Firm Employees, Acceptance, Artificial Intelligence, New Technology, Technology Acceptance Model

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## Table of Abbreviations

The Full Notion	Abbreviation
Artificial Intelligence	AI
Attitude Toward Using	A
Behavioral Intention to Use	BI
Data Processing Agreement	DPA
Due Diligence	DD
Information Technology	IT
Mergers & Acquisitions	M&A
Non-Disclosure Agreement	NDA
Perceived Ease of Use	EOU
Perceived Usefulness	U
Research & Development	R&D
Smart Technology, Artificial Intelligence, Automation, Robotics & Algorithms	STAARA
Technology Acceptance Model	TAM

## Table of Definitions

Concept	Definition
Artificial Intelligence	Artificial intelligence has the ability to interpret, learn and use external data to complete specific tasks through adaptive behaviour (Kaplan and Haenlein, 2019).
Tech-Oriented Law Firm	A law firm focusing on innovation and technology where the organizational structure is somewhat flat, with people responsible for business areas instead of having a partner responsible for a legal practice area.
Due Diligence (Legal)	During an M&A process, a legal due diligence is the procedure of collecting, assessing and understanding the associated legal risks. It refers to the acquirer reviewing the documentation pertaining to the target company (Teasdale 2017).
Information Systems	An information system is a technical and organizational system designed to process and distribute information.
Research & Development	The process of gaining insights to create new technology or systems. This could by extension lead to new products or services. Research & Development is done by companies (Hall 2002).
Traditional Law Firm	An organization with an “ <i>up-or-out</i> ” structure. Being a partner is the ultimate goal and it is important to climb the hierarchy. This is similar to a pyramid structure. Billing per hour is a part of how such a law firm’s services are prized (Lennartsson, 2018).

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# **1. Introduction**

## **1.1 Problematization**

The emergence of technology and its development is a continuous process. This puts a lot of pressure on management to implement and educate the employees faced with the entry of these new technology tools. Hence, it is vital to identify expectations, attitudes and beliefs among those who are involved (Batt-Rawden, Björk and Waaler, 2017).

Today, artificial intelligence (AI) is a new technology on the verge of being a reality for many practices (Reynoso, 2019). AI is defined as such artificial intelligence which has the ability to interpret, learn and use external data to complete specific tasks through adaptive behavior (Kaplan and Haenlein, 2019). AI is emerging rapidly, and its computing has been doubling every 3.4 months since 2012 (Perrault et al, 2019). The adoption of this new sprung technology and how it has been embraced varies between industries (TATA Consultancy Services, 2020). In Sweden, up to 52 percent of all jobs could be automated within the next two decades (Roine, 2016) and there is speculation about what the entry of AI will mean for employees both short-term and in the long-run (Krasadakis, 2018).

AI has now started to surface in an increasing number of professional services firms (Brown, 2020). Law firms are a type of professional services firm on the verge of adopting an increasing amount of AI (Nobile, 2019). One peculiar characteristic of the legal industry is its nature of being conservative and not particularly keen to embrace change (Lindström 2015). Lawyer as a title in Sweden is reserved exclusively for members of The Swedish Bar Association, which is the governing entity of the industry (Sveriges Advokatsamfund, 2016). Another peculiar characteristic of the legal industry is that employees are law firms' most important assets (Empson, 2000). The industry depends on its employees' competence rather than machines (Empson, 2000), and tend to be somewhat behind other industries when it comes to adopting AI (Merrill, 2018). In the end, employees' opinions towards new technology matter. Meyer, Jonas and Roth (2020) suggest that employee acceptance is crucial for technology implementation and Knight (2015) states that it is important to convince the employees in order for a company to effectively adopt new technology. Recognizing the important role employees play in the implementation process, this thesis paper will research what causes law firm employees to develop acceptance towards the application of AI tools, with the use of the Technology Acceptance Model as the theoretical framework.

## **1.2 Previous Research and Research Gap**

AI has turned out to be important as many futurists and business-people claim that we are in the midst of a fourth industrial revolution due to the rapid advancements in technology, including artificial intelligence (Schwab, 2016), which is why many studies have been conducted with a focus on AI. There are studies about artificial intelligence (Prentice, Lopes



and Wang, (2019), followed by research on the rise and progression of AI in various organizations (Alarie, Niblett and H Yoon, 2018). Prentice, Lopes and Wang (2019) state that AI already is used to a great extent in businesses in a multitude of different industries. The role that AI has in many organizations depends on the level of complexity and what type of jobs the employees have (Prentice, Lopes and Wang, 2019).

However, there is little research about AI in law in general and even less about the employee perspective in particular. The lack of research in the area is unfortunate since AI is said to cause significant change as to how law firms are operated (Handa and Papineau-Wolff, 2019). Despite that there is far less research within these two areas, there are of course some studies conducted. For instance, there is research regarding what AI can be used for to benefit law firms (Markoff, 2011). Mackenzie and Stagl (2019) discuss how AI solutions are available to help law firms increase their speed and efficiency of analysis. Klumpp (2018) describes how acceptance towards new technology is achieved among employees. Moreover, Kolbjørnsrud, Amico and Thomas (2017) shed light on skepticism towards AI among managers, and Prentice, Lopes and Wang (2019) research emotional intelligence and AI from an employee perspective in the hotel industry. Given the limited amount of research when it comes to AI usage in Swedish law firms and because of the fact that employee acceptance is important for technology implementation (Knight, 2015), this thesis aims to further depict what causes Swedish law firm employees to develop acceptance towards the application of AI tools.

### **1.3 Purpose and Research Question**

Employee acceptance is important for technology implementation (Meyer, Jonas and Roth, 2020). The appearance of AI is becoming increasingly more prevalent in law firms and because it is important to achieve employee acceptance in order for organizations to successfully implement new technology (Knight, 2015) this thesis aims to further explore this research gap. Hence, the research question is;

- What causes law firm employees to develop acceptance towards the application of AI tools?

Achieving employee acceptance is important when implementing AI in law firms. This thesis will consequently function as a help for law firms when implementing AI by investigating factors facilitating the development of employee acceptance.

### **1.4 Delimitations**

The thesis will gather research from law firm employees holding various positions in different departments, (in one case, a respondent held a position working at a law firm a few years ago). The motivation behind this is to gather opinions and perceptions from people employed in various positions that consequently have various areas of expertise as well as

different traits and attitudes towards artificial intelligence. The respondents in this study are employed by three different Swedish law firms stationed in Stockholm, Sweden.

Moreover, this thesis has limited the definition of artificial intelligence to AI tools that are used by the employees in these law firms. To clarify, that is AI tools that are actively or passively being used or tested, that have or will have an effect on the work of the employee in some way. An AI tool in this thesis is defined as a tool that has the ability to interpret, learn and use external data to complete specific law-related tasks through adaptive behavior (Kaplan and Haenlein, 2019).

## **2. Literature Review**

### **2.1 Literature Review Overview**

This thesis combines three concepts in literature; new technology, artificial intelligence in legal services, and automation and artificial intelligence from an employee perspective. The literature review will be structured going from a macro-perspective (New Technology) to a meso-perspective (Artificial Intelligence in Legal Services) and finishing with a micro-perspective (Automation and Artificial Intelligence from an Employee Perspective).

### **2.2 New Technology**

Many futurists and business-people suggest that we are in the midst of the fourth industrial revolution because of rapid advancements in smart technology, artificial intelligence, automation, robotics, and algorithms, that will have significant effects on businesses, government, and society (Schwab, 2016). This development is referred to as “smart technology, artificial intelligence (AI), automation, robotics, and algorithms” (STAARA) (Brougham and Haar, 2017), which is said to impact and change the way in which we work, and thus what jobs will be changed and lost as an effect. In a research paper by Frey and Osborne (2013) it is suggested that 47% of total US employment is at risk of being replaced by new technology over the next two decades. In Sweden, this percentage estimate is even larger, at 52% (Roine, 2016).

One of the most obvious effects from productivity increases due to technology is the elimination of jobs (Brougham and Haar, 2017). However, history has shown that new jobs always have been created to replace old ones (Allen, 2015). Smith and Anderson (2014) refer to the *Pew Research Internet Project*, which consisted of insights from nearly 1,900 experts and futurists, in which nearly half (48%) envisioned that a significant number of both blue- and white-collar-workers will be displaced by robots by 2025, with many warning that this can cause dramatic increases in income inequality and mass unemployment. However, the other half of the experts in the study expected that technology will not displace more jobs than it will create by 2025, and that human ingenuity and creativity will create new jobs and industries, referring to the dawn of the industrial revolution, where this development prevailed (Smith and Anderson, 2014).

The service industry is influenced by AI in two ways. On one hand, AI is increasingly reshaping the industry by offering different tasks and enabling innovation opportunities, but on the other hand it is threatening human jobs (Ming-Hui and Roland T, 2018). Ming-Hui and Roland T (2018) state that AI will primarily take over many analytical tasks in the industry and that “softer” intuitive and empathetic skills will become more important for employees to become un-substitutable. Further, research suggest that different jobs within the legal services industry will be substituted and complemented. Frey and Osborne (2013) anticipated that jobs such as legal writing soon will be automated. Also, sophisticated

algorithms are gradually taking on a number of tasks performed by paralegals, contract, and patent lawyers. Thus, law firms now increasingly rely on computers (Markoff, 2011). However, according to Kronblad (2019), data shows a significant difference between firms within the industry, where new players adopt new approaches and incumbents largely remain the same.

Conclusively, research suggest that jobs in many industries are going through changes as a result of rapid technological change. Some research point towards mass-substitution of human capital from technology, while other research suggests no net effect, or even that more jobs will be created as a result. This illustrates that the area is somewhat contested. According to research, the service industry in general, and the legal services industry in particular, are going through technological change, which has effects on both jobs and competition. This will be discussed more in depth in the next section.

### **2.3 Artificial Intelligence in Legal Services**

The traditional and institutionalized legal industry is changing and experiencing turbulence with new entrants providing legal services in new ways, using digital technology and new business models (Kronblad, 2019). According to Kronblad (2019), this is faced by reluctance from legal professionals as digitalization makes it possible to automate and streamline. This will cause the required number of billable hours to decrease, which is a threat to revenue models and profitability (Kronblad, 2019). An industry characterized by high knowledge intensity, low capital intensity and a professionalized workforce is faced with new players adopting new approaches when incumbents largely remain the same (Kronblad, 2019). Kronblad (2019) argues that this difference is driven by a dominant logic in law firms that makes it difficult for incumbents to adapt to digitalization, while new players use the institutional complexity driven by digitalization in order to exploit new opportunities and practices.

Lawyers and law firms have been late adopters when it comes to technology, but the latest development of innovations in AI is offering enough value for that trend to change and firms are increasingly using more sophisticated AI tools today, to improve speed and efficiency (Mackenzie and Stagl, 2019). Further, Mackenzie and Stagl (2019) claim that these tools are now allowing boutique firms to compete with the slower moving giants by charging lower prices for the same services, offering more per billable hour. Because of advances in AI, modern software can analyze documents at a fraction of the time for the fraction of the cost, leading to human capital being substituted or complemented by technological capital (Kronblad, 2019). Computers are also rapidly becoming better at mimicking human reasoning and are claiming work done by people in advanced professions. Today, AI is capable of examining data, making comparisons and, based on these observations, take action (Brynjolfsson and McAfee, 2017). AI and other emerging tech are said to drive the next revolution in legal services Nobile (2019). To one extent, there is a sense of urgency today

among lawyers and firms to embrace AI, or otherwise being left behind in the technological dust (Nobile, 2019). Investments in technology is now a priority in the industry as law firms realize striking benefits, and products become better suited for their needs (Byrne, 2016). There is however a reluctance in the legal industry to adopt new technology and some of the reluctance is based on concern that AI could replace human capital (Nobile, 2019).

Conclusively, research suggest that AI will drive the next revolution in legal services. The entrance of new players focusing more on technology forces incumbents in the industry to adapt. AI is proposed to offer value for law firms, but it also puts pressure on the firms' current ways of conducting business.

## **2.4 AI and Automation from an Employee Perspective**

Little research has been conducted on how employees view their jobs and careers in the age of automation and artificial intelligence, as well as how AI may affect organizational outcomes from an employee perspective (Brougham and Haar, 2017). While the focus mainly has been on the technicalities and practical implications from AI implementation in businesses, less emphasis has been given to employees (Prentice, Lopes and Wang, 2019). However, some of the existing research will be discussed below.

Klumpp (2018) published an article on human resistance and acceptance of AI and automation suggesting that human interactions towards AI and automation can be divided into three areas of increasing resistance and intrusion. AI trust can be achieved when people actively and trustfully collaborate with automated tools (Klumpp, 2018). According to Klumpp (2018), trust towards an AI application might be developed only if the application is perceived to behave and communicate like a human being. In a practical setting, a conclusion from the study was that apprehension and resistance towards AI affect the performance of human-AI cooperation at the workplace (Klumpp, 2018). Further, Xu and Wang (2019) suggest that the opportunity cost must be accounted for when trying to understand what drives technology adoption in law firms.

Moreover, Kolbjørnsrud, Amico and Thomas (2017) conducted a study of skepticism towards AI among managers in which patterns of managers' attitudes towards AI were identified. In a survey, 84 percent of all managers expected that AI will make their work more effective and interesting, but far less, 36 percent, feared that AI threatens their jobs (Kolbjørnsrud, Amico and Thomas, 2017). Further, the managerial level influences the level of optimism towards AI according to the study. While top managers are more optimistic to AI integration, mid-level and front-line managers are less enthusiastic, with descending optimism down the managerial levels (Kolbjørnsrud, Amico and Thomas, 2017).

In addition, Brougham and Haar (2017) published a journal about employees' assessment of their job insecurity from STAARA. The results from the study suggest that job control affects the complexity and job repetition, which in turn predicts the probability of job insecurity

from STAARA. Complexity was found to have double the impact of job repetition, implying that jobs of a complex nature are less likely to be replaced (Brougham and Haar, 2017). Employees' self-assessment of the likelihood of losing their jobs was found to be negatively related to actual job insecurity from STAARA, suggesting that employees may not be best at assessing technology's potential to replace their jobs (Brougham and Haar, 2017). Finally, Prentice, Lopes and Wang (2019) conducted a study on emotional intelligence and AI from an employee perspective in the hotel industry. In the study, AI was found to have a strong positive effect on employee performance, but no effect on employee retention (Prentice, Lopes and Wang, 2019).

Conclusively, research suggest that the emergence of AI comes with skepticism and resistance among employees, serving as obstacles towards AI collaboration. However, AI was found to have a positive influence on job performance and that the optimism towards AI increases higher up the hierarchy.

## **2.5 Literature Review Summary**

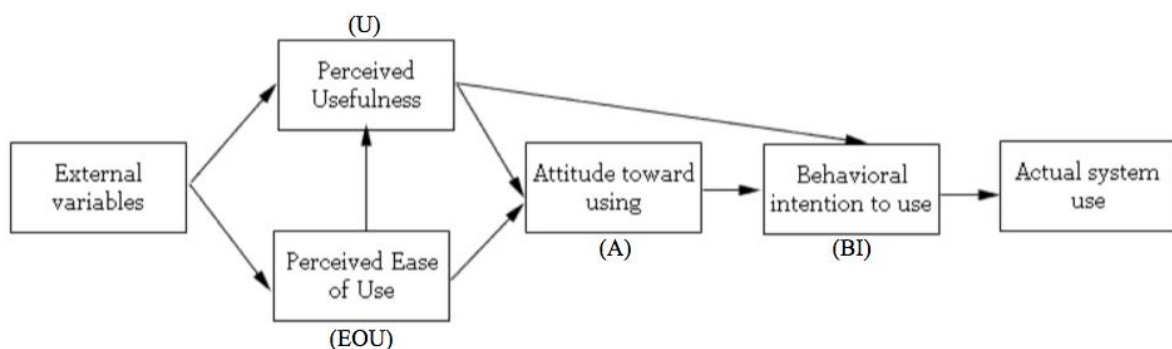
Research suggest that jobs in many industries in general and the legal industry in particular are going through changes as a result of rapid technological development in AI and other emerging tech. Despite these technological advancements, there is often a reluctance in the legal industry to adopt such new technology. Technology development affects employees and as technology acceptance from an employee perspective is less explored in law firms, there is a research gap that this thesis attempts to fill. The theoretical framework used to do so is the Technology Acceptance Model.

### 3. Theoretical Framework

#### 3.1 Technology Acceptance Model

The Technology Acceptance Model (TAM) was originally introduced by Davis, Bagozzi and Warshaw (1989). TAM is adapted from the Theory of Reasoned Action and considered as one of the most influential and commonly used theories for describing individuals' acceptance of information systems (Lee, Kozar and Larsen, 2003). TAM is built upon decades of information systems research, suited for modelling computer acceptance (Davis, Bagozzi and Warshaw, 1989). The model is generally applicable and has been used in various studies researching new technology and artificial intelligence in different industries, where it has been used as a theoretical framework for explaining individuals' acceptance of information systems. For instance, TAM has been used in the study; *An investigation of employees' use of e-learning systems: applying the technology acceptance model*, which researches employees' acceptance of e-learning systems in various industries (Lee, Hsieh and Chen, 2013). TAM has also been used to research the legal industry. In the study; *Adopting robot lawyer? The extending artificial intelligence robot lawyer technology acceptance model for legal industry by an exploratory study* the authors investigate issues of the introduction of artificial intelligence in the legal industry, and proposed an extended version of TAM (Xu and Wang, 2019). Further, in the study; *Pursuit of the Elusive Antecedents: Action Research Unveils Factors Influencing Technology Adoption by Small Law Firms* technology adoption by attorneys and law firms are studied and the findings in the research were used to propose an extended TAM (Lambert, 2010). To conclude, TAM is a general model which is considered suitable for studying individuals' acceptance of information technology. Also, worth noting is that various researchers have proposed extensions to the original model as can be seen in for example studies by (Dishaw and Strong, 1999) and (Jamšek and Culiberg, 2020). Consequently, the precedence illustrates that the model is adequate for areas of study close to the scope of this thesis.

The components of TAM and their relationships are displayed in *Figure 1* below.



*Figure 1 - Technology Acceptance Model* (Davis, Bagozzi and Warshaw, 1989), modified by Tiedtke and Säflund (2020).

User behavior is explained by TAM by starting from *Perceived usefulness* and *Perceived ease of use*, going forward to user acceptance, while *external variables* are included to highlight and explain how various variables outside those explicitly mentioned by the model can influence user acceptance (Davis, Bagozzi and Warshaw, 1989).

Contextually, TAM has the purpose of giving a general explanation of user acceptance in a variety of information systems (Davis, Bagozzi and Warshaw, 1989). TAM states that two variables determine an individual's acceptance of information systems (Davis, 1986): That is: (1) *The Perceived Usefulness* (U) and: (2) *The Perceived Ease of Use* (EOU). The two factors describe individuals' decisions about when and how to use novel technology. The first factor, *perceived usefulness*, is defined as a prospective user's subjective probability that appliance of an application system will increase the user's job performance in an organizational context (Davis, Bagozzi and Warshaw, 1989). The second factor, *perceived ease of use*, is defined as the degree of ease and how free of effort the prospective user expects the application system to be. According to Davis, Bagozzi and Warshaw (1989), the perceived usefulness has a high influence on individuals' intention to use a system, while the perceived ease of use has a smaller, but still significant, influence on intentions to use the system. As can be seen in *Figure 1*, the two variables are influenced by numerous external variables that are beyond the scope of those variables explicitly mentioned in TAM, but still have an impact on individual acceptance (Davis, Bagozzi and Warshaw, 1989). These external variables provide the bridge between the internal beliefs, attitudes and intentions represented in TAM, and the various differences and situational constraints influencing behavior (Davis, Bagozzi and Warshaw, 1989). In theory, EOU is solely determined by these external variables, while U is determined by both external variables and EOU, implying that EOU also is an influencing variable on U (Davis, Bagozzi and Warshaw, 1989). Given the contribution that EOU has on improved performance, it would have a direct effect on U. Hence, EOU and U is seen as two separate but related elements. Conclusively, TAM's U and EOU are defined as general determinants of user acceptance and the constructs are treated as two separate constructs that are expected to be positively valued outcomes for most people's user acceptance (Davis, Bagozzi and Warshaw, 1989).

According to TAM, *Attitude toward using* (A) is mutually determined by *Perceived usefulness* (U) and *Perceived ease of use* (EOU). U is proven to have a positive influence on A since positively valued outcomes often increase one's tendency toward the means of achieving those outcomes. According to TAM, there are two mechanisms by which EOU influences attitudes and behavior: self-efficacy and instrumentality. The easier a system is to use, the greater is the user's sense of efficacy and personal control regarding the user's ability to operate the system. Efficacy is one of the major factors underlying intrinsic motivation, and the EOU-A relationship is supposed to capture this intrinsically motivating factor of EOU (Davis, Bagozzi and Warshaw, 1989).



According to TAM, the *behavioral intention to use* (BI) determines *actual system use*. The model postulates that BI is jointly determined by the individual's attitude toward using the system (A) and the perceived usefulness of the system (U) (Davis, Bagozzi and Warshaw, 1989). Further, the perceived usefulness also has an additional effect on the attitude towards using the system (Davis, Bagozzi and Warshaw, 1989). According to TAM, all else being equal, the A-BI relationship implies that individuals form intentions to perform behaviors toward those they have a positive attitude, and the U-BI relationship implies that individuals form behaviors toward those they think will increase job performance. The latter is considered to be more significant than the former since enhanced performance is contributory to other extrinsic rewards apart from the content of the work solely (Davis, Bagozzi and Warshaw, 1989). Hence, the U-BI relationship states that people's intentions to use computer systems depend largely on people's mental evaluation of how it will improve their performance. Davis, Bagozzi and Warshaw, (1989) refer to various studies that have had similar findings, emphasizing fairly robust underlying relationships.

### **3.2 Theory Discussion**

TAM is claimed to be one of the most widely used theoretical models in the field of information systems and user acceptance (Lee, Kozar and Larsen, 2003). However, there are critics suggesting that the model has its limitations. Weng (2018) states that, even though TAM is a helpful framework for understanding how user acceptance of new technology arise, the model needs to be revisited in terms of how it is conceptually used and applied. TAM explains a user's technology acceptance based on a user's perceived usefulness and perceived ease of use (Dishaw and Strong, 1999). Nevertheless, Weng (2018) criticizes TAM, claiming that the model needs to be extended to better accommodate contextual peculiarities. In doing so, the model would increase its utility and practical use, leading to enhanced explanatory capabilities of how user's come to accept new technology. With that being said, contextualizing the features and realities of the user environment adds further explanatory value to how user acceptance emerges (Weng, 2018).

In addition, Ajibade (2018) means that even though employees have professional goals and an own will, these need to be aligned with the organization's characteristics and goals. There are other factors affecting technology acceptance apart from an individual's perceptions as employees for example are obliged to follow organizational rules and regulations (Ajibade, 2018). Moreover, TAM suggests that the attitude toward using and the behavioral intention to use are parts of what leads to technology acceptance (Davis, Bagozzi and Warshaw, 1989). However, Ajibade (2018) states that the attitude toward using and the behavioral intention to use as a part of TAM are merely consequential effects of the perceived usefulness and the perceived ease of use leading to actual system use in the end.

### **3.3 Theoretical Framework Summary**

TAM consists of five interrelated elements describing individuals' acceptance towards technology. Actual system use is the end-result of individual acceptance according to TAM; hence acceptance equals actual system use. Conclusively, TAM is used in this thesis as it can help to explain what causes law firm employees to develop acceptance towards the application of AI tools. That is because it explains what drives acceptance based on perceptions of individuals and that is what the scope of this thesis is about.

## **4. Method**

### **4.1 A Study Shaped by Social Constructionist Ontology and Interpretivism**

This thesis follows a social constructionist ontology approach. Bell, Bryman and Harley (2019) states that the reality is established by the people constituting it. Given that the employees are at the heart of this study, this thesis aims to understand the thought-process of its interviewees by reflecting the distinctiveness that characterizes law firm employees. With the “*what*” at the center of this study, the authors of this thesis intend to arrive at an interpretation of the outcomes of law firm employees’ thoughts and social behavior. By elicitation of the interviewees’ personal perspectives this thesis follows an interpretivist view. Firstly, since this thesis emphasizes differences between people, and secondly since what impact an individual’s acceptance are subjective in nature.

### **4.2 An Abductive Study**

This thesis follows an abductive approach. The empirical data gathered was collected simultaneously as the theory was chosen to explain and analyze the results that were gathered. This was also done at the same time as literature research was conducted. The thesis aims to further add value to research by presenting results on what causes law firm employees to develop acceptance towards the application of AI tools.

### **4.3 Selection of Interviewees**

The interviewees selected, as presented in *Table 1*, has to be associated with a law firm through a current employment. In one case, the interviewee previously worked at a law firm but is now a PhD student researching AI and law. As the respondent has been working at a law firm recently, the respondent has seen the practical implications of AI implementation firsthand and combined with the provided research perspective, the respondent is considered to add explanatory value to the study and is consequently included in the sample. This thesis aims to provide a practical view of what causes law firm employees to develop acceptance towards the application of AI tools, which is why the selection was made accordingly.

<b>Job Title</b>	<b>Legal Practice Area</b>	<b>Type of Law Firm</b>	<b>Interview Medium</b>
Associate	Banking & Finance	Traditional	In Person
Associate	Data Protection & Commercial Agreements	Tech-Oriented	Telephone
Associate	M&A	Traditional	Telephone
Associate	Public Procurement	Traditional	Telephone
Head of Digital Services	N/A	Tech-Oriented	In Person
Head of Digital Services & Innovation	Former M&A Associate	Traditional	In Person
Legal Assistant	Capital Markets	Traditional	Telephone
Partner & Head of Innovation	Capital Markets & Public M&A	Traditional	Telephone
PhD Student - Researching AI in Law Firms	Former M&A Associate	Traditional	Telephone
Senior Associate	Intellectual Property, Marketing Law, Media Law and IT & Telecom	Traditional	FaceTime
Senior Associate	M&A	Traditional	In Person

*Table 1 - List of Interviewees*

The interviewees come from three different law firms. Two of them count as traditional law firms that are larger and have an “*up-or-out*” structure. Being a partner is the ultimate goal and it is important to climb the hierarchy. The organizational structure involves automatic removal of those who are not ambitious enough (Lennartsson, 2018). Their organizational structure is similar to a pyramid structure.

Two respondents are employed at another “type” of law firm, that is a tech-oriented law firm; a new player, focusing on innovation and technology. The organizational structure is flatter, and people are responsible for business areas instead of having a partner responsible for a legal practice area, and it does not follow the pyramid structure of a traditional law firm. The size of the law firm is also smaller.

The reason behind the choice of talking to employees at different types of law firms is to enable a better generalizability, independent of which law firm the employee work at.

#### **4.4 Collection of Empirical Data**

The study focuses on a single point in time, that is the present, and it is therefore a cross-sectional study (Bell, Bryman and Harley, 2019). The selected research method is chosen with regards to the flexibility that a semi-structured qualitative interview process allows. That the conducted questioning allows the interviewers to understand the interviewees' social world and how that is reflected in their way of dealing with and acting in a certain environment is described as essential by Bell, Bryman and Harley (2019). The interviews conducted did not strictly follow a planned outline of questioning which is why the selected interview-process is semi-structured (Bell, Bryman and Harley, 2019). An interview guide was used, see *Appendix 1*. For the purpose of this study, the interview guide was allowed some flexibility to allow each interviewee to discuss what they perceived as more important, which is why all questions were not always asked during each interview. Hence, the time spent on each topic varied slightly between the interviews. However, a foundation of questions remained the same throughout the study to keep the core intact. According to Bell, Bryman and Harley (2019), a few closed questions should be asked in line with the semi-structured interview process. In this study, such questions regarded the interviewees' job title and legal practice area.

One interview was held with two respondents present at the same time. This is discouraged if the interview is structured according to Bell, Bryman and Harley (2019) but since the interviews were semi-structured, this was less of a problem. Rather, it drove the interviewees to a more in-depth reasoning. However, the fact that the interviewees could influence each other's reasoning by their mere presence is a potential bias.

#### **4.5 The Empirical Data**

The interviews were conducted parallel with the analysis of the data. An inter-coder consistency was ensured to increase internal reliability by having both authors of this thesis agree upon what data to extract as well as working together when concluding the main points and patterns from the extracted data displayed in this paper.

The empirical data is structured according to identified similarities and recurring topics discussed during the interviews. As a result, seven themes as presented in *Table 2* were identified, that constitute the structure of the empirical data section.

Structure of the Empirical Data
1. AI Usage
2. AI and Corporate Law
3. The Ease of Using AI Tools
4. AI and the Legal Industry
5. Economic Aspects
6. Regulations
7. The Future of AI in Business Law

*Table 2 - Structure of the Empirical Data*

#### **4.6 Ethical Considerations**

There are mainly two philosophical approaches to research ethics; a teleological view and a deontological view. A teleological view claims that the ends justify the means while the deontological view argue that the use of unethical research can never be justified (Akranga and Makau, 2016). This thesis is based on the latter deontological approach, aiming to not willfully misinterpret the respondents' answers and to present the respondents' statements in an objective manner.

The interviewees were assured anonymity when it comes to their name and company belongingness. The respondents were asked to approve the display of their work title and what legal practice area they work in. The interview was not recorded unless it was agreed upon beforehand with the respondent. This was done in line with the deontological approach. Refraining from referring to the respondents by names or through revealing other sensitive information is important to uphold research ethics (Akranga and Makau, 2016). If sensitive information is to be disclosed, consent must be given by the interviewee (Akranga and Makau, 2016).

#### **4.7 Method criticism**

This thesis aims to fulfill reliability, credibility and authenticity. The selection of law firm employees was done based on a few sets of criteria earlier mentioned but was also governed by the authors' personal network to some extent, which may be cause for some bias. Further, it is not possible to make generalizing conclusions based on a study including a sample of eleven interviews. Instead this study aims to shed light on the subject-matter.

Some of the interviews were conducted in person and others over the phone or through FaceTime. Having conducted several telephone interviews do not necessarily have to be negative as non-face-to-face interviewing is becoming increasingly effective compared to in-person interviewing due to technological advancements (Bell, Bryman and Harley, 2019).

One advantage according to Bell, Bryman and Harley (2019) is that when interviewing in person, respondents' replies can be affected by traits that the interviewer has or by the interviewer's mere presence. According to Bell, Bryman and Harley (2019), phone interviews might be beneficial, removing this source of bias. However, phone interviews tend to be shorter than interviews in person (Bell, Bryman and Harley, 2019). Nonetheless, both the phone- and in-person interviews in this study lasted between 30-60 minutes. Further, one of eleven interviews were recorded. The interviews that were not recorded are subject to potential error since this can lead to distortion of respondents' answers (Bell, Bryman and Harley, 2019). However, not recording may lead the interviewees to feel more relaxed and consequently being more forthright. In some cases, not recording was a prerequisite for conducting the interview.

The interviews were held in Swedish and then translated into English. It generates certain bias since phrases and expressions in Swedish may sound differently and mean something else in English. The translation process is based on cultural differences where the interviewer interferes with the data and the translator interferes with social concepts and meanings (Bell, Bryman and Harley, 2011). According to Bell, Bryman and Harley (2011) the translation process involves the translator's knowledge, social background and personal experience. These are factors that need to be accounted for when interpreting the empirical data presented in this thesis.

## 5. Empirical Data

### 5.1 AI Usage

To provide an overview of how AI is being used by the respondents, this empirical data section will start off by outlining to what extent the respondents use AI. This differed not only between firms but also between group belongingness as a result of which legal practice area the respondents are specialized within. Below follow three quotes from employees who barely use AI tools.

*“Right now, I’m not using that much AI. We have a program that looks for documents and finds errors. Not exactly like an AI though. We also have programs that define concepts that are not defined.”*

- Senior Associate; Intellectual Property, Marketing Law, Media Law and IT & Telecom

*“My own experience is that I do not work with any AI tools, but my opinion is that there is a lot of talk about it in general. It’s a fashion word today.”*

- Associate; Banking & Finance

*“As an assistant, I have not used any AI tools.”*

- Legal Assistant

Some employees mentioned that they have tested some AI tools. A tool called Luminance, used for due diligence processes, were mentioned repeatedly. However, these respondents have just been using Luminance as a test, not in real-work situations.

*“I have used Luminance which is an AI-tool for due diligence. However, I haven’t used it directly in a project towards a client. Partly because you work as you always do. However, Luminance is used when starting up our projects. This is mainly where it saves us time.”*

- Associate; Mergers & Acquisitions

As some respondents state that they have not used AI in real-work situations there are some who use AI tools more frequently but still consider the progress to be slow.

*“We have tested Luminance and Kira for a long time and started running live DDs and Luminance at the same time. But things are going pretty slow.”*

- Partner & Head of Innovation; Capital Markets & Public M&A

There appear to be certain legal tasks where using AI tools are better suited, which intensifies the usage, such as if there are many agreements of the same sort.



*“We choose to work with AI-tools for example with privacy policies and data processing agreements because those are common agreements. There are many so it's easy to figure out the rationale of saving time there.”*

- Head of Digital Services

*“We use tools on and off. For example, one tool reviews privacy policies, other reviews agreements such as processing agreements etcetera which are more complex. We use tools for the review of data processing agreements and privacy policy checks as well.”*

- Associate; Data Protection and Commercial Agreements

There appear to be a number of different areas where AI tools are applicable. Areas for where AI tools can be used are constantly looked at and the implementation process is underway.

*“We have several tools which we have looked at (Appendix 2) of which only one that we have used more of; Luminance. Luminance is an AI tool for due diligence processes that reads agreements based on what it has learned and then extracts the data points from which you then make your own assessment.”*

- Head of Digital Services & Innovation

## **5.2 AI and Corporate Law**

Many respondents discussed why it is not unproblematic to implement AI. One respondent specifically mentioned quality assurance, reliability and how the use of AI aggravates the control of the legal advice provided.

*“We provide counseling and in that counseling we give a professional opinion, a stamp of quality that guarantees something and we, who give this counseling, will be reliable if it's wrong.”*

- Associate; Banking & Finance

In addition, respondents discussed how they are under constant time-pressure to finish their tasks in time and how serving the client's wishes comes first.

*“Above all, time is critical. As lawyers, we are under constant time-pressure. We do not control our own time and we have to adapt to the client's wishes. The client comes to us for a quality check. Certain AI can make it more cost-effective, but there is still a value in the human quality review.”*

- Senior Associate; Mergers & Acquisitions

Besides, the use of AI must be disclosed to clients. That is the risks that may come with having an AI do most of the work instead of it being performed by a lawyer.

*“If you offer clients AI solutions, you must disclose the risks.”*

- Associate; Mergers & Acquisitions

Time appears to be critical and whether the use is perceived to be relieving or aggravating differed among the respondents. Several interviewees expressed that the use is time-consuming.

*“Currently it takes more time to use these programs than if you were to do everything manually yourself as we always have.”*

- Partner & Head of Innovation; Capital Markets & Public M&A

In addition, AI tools need a lot of data to function effectively which was expressed by an interviewee as an aggravating circumstance.

*“The biggest challenge is to “educate” the tools. You have to feed the tools with a lot of data and that takes a lot of time which is a hassle.”*

- Legal Assistant

Even though many challenges were expressed, the use of AI tools are suggested to provide advantages.

*“First and foremost, for example, the DPA-tool we use removes unqualified tasks.”*

- Head of Digital Services

Further, another employee mentioned that the AI tools can function to reduce human error and as a consequence improve quality.

*“AI does not only save time, but it also functions as a quality check. Hence, we can eliminate the error of the human factor. With manual labor, there is a trade-off between quality and time where the quality is the most important.”*

- Associate; Data Protection and Commercial Agreements

### **5.3 The Ease of Using AI Tools**

An employee's sense of how difficult it is to use an AI tool is important. The time it takes to learn and understand the AI tool and how lawyers' demands will change were discussed.

*“Over time, you will not need to understand the technology behind it. The tools can be used with ease. In the future, lawyers must be much more open to address issues that are not as regulated. The more technology that is applied, the more important it becomes to have genuine legal expertise.”*

- Former Associate M&A, Current PhD Student

On a further note, it takes time to adjust to AI usage.

*“I think you need time to understand the tools and feel that you are reprogramming yourself a little. Hence, there will be more work in the short-term. The starting distance is very long.”*

- Senior Associate; Mergers & Acquisitions

It appears to be important for employees to see the gain of the use, and as the development of AI is in the early stages, this is brought up as an aggravating circumstance.

*“At this stage, AI is still in its infancy. Right now, it requires more work than we get benefits as a result of it. So currently there’s no gain for me in using it.”*

- Associate; Mergers & Acquisitions

However, apparently the difficulty of the usage depends on the AI tool and the benefit of the usage differs between legal practice areas. When the use is free of effort there appear to be clear benefits from using AI.

*“There are no difficulties in using the AI tools and there are low thresholds to use the systems. [...] Using all the AI tools save a lot of time. I only need a few “clicks” on the computer and then the tools do all the work for me.”*

- Associate; Data Protection and Commercial Agreements

*“Let me show you a DPA first. This agreement is on 26 pages and looks like this. Normally, you read these 26 pages and it takes time, usually a few hours. Our tool is a more advanced AI basically. It not only looks at if the agreement misses parts that should be included but also if the parts included are correct or not. It may take 15-20 seconds to complete.”*

- Head of Digital Services

Even though there are tools that are easy to use with minimum effort, the work produced by the AI tool has to be reviewed by the employee.

*“AI still requires us to check the result afterwards, that is the tools are autonomous to the extent that they produce a result, but you still have to quality-check its results.”*

- Head of Digital Services & Innovation

## **5.4 AI and the Legal Industry**

Understanding business law is vital to see the benefits of AI usage. One respondent state that law is subjective, meaning that there are no clear data points and that it is a matter of judgement as to what the appropriate data points are.

*“The first thing to consider is what AI is and what law is. It is about data extraction and process optimization. The critical thing is that law is subjective and business law is even more subjective. [...] In law, it is much more difficult to agree on what the data points*

*actually are.”*

- Head of Digital Services & Innovation

There are different legal practice areas in business law and the utility differs between practice areas as a consequence.

*“If we would have been able to use data from previous cases for new ones, we would have used it for sure. However, legal disputes are about such different things that it is difficult as the common denominator is so small between each case. Unlike for example in M&A, where the buyers want more or less the same thing it is much easier to automate since the product is often the same.”*

- Associate; Public Procurement

Lawyers are well aware of the legal consequences of not managing data correctly. One employee expressed a risk averse attitude referring to data concerns as AI needs a lot of data to function.

*“Concern about what's going on with the data. We work with laws and regulations, so we know the risks. What if you make mistakes? We deal with a lot of classified information which is why we're aversive towards the data being in the wrong hands and have a risk averse attitude as a whole.”*

- Associate; Public Procurement

## **5.5 Economic Aspects**

Many respondents were discussing the economic aspect tied to the business model of law firms. Billing by the hour as law firms have done traditionally seems to be aggravating for the use of AI. However, clients now tend to demand more fixed prices which could be beneficial for the use of AI moving forward.

*“The business model is a major part. We are light years away today. If you do this right, then an hourly rate will not hold in the long run. What we notice when we are doing IPOs, acquisitions or reconstructions are that clients want a fixed price.”*

- Partner & Head of Innovation; Capital Markets & Public M&A

Since law firms traditionally bill by the hour and AI tools will reduce the time it takes to complete tasks, using AI is not always sought after by partners as it might affect their economic compensation.

*“To convince people internally that these AI tools will give us time to spend on other more rewarding tasks and taking time from the billable hours, is not always sought after by partners. That is that the business is time-efficient. There is resistance towards doing things a*

*little too fast because it is less profitable.”*

- Associate; Public Procurement

As the effectivization that AI offers impacts the economic compensation of partners there is a conflict between short- and long-term strategies. Older partners may prefer dividends instead of reinvestments in the firm that could have been allocated towards R&D to yield returns long-term.

*“The firm has a bunch of partners of different ages, someone who is young who is all for setting aside money for R&D since it yields returns later but then you have someone who retires in three years and wants his share of the earnings right now. The legal regulations are what they are, but this is the core of the problem.”*

- Partner & Head of Innovation; Capital Markets & Public M&A

There seems to be a difference between law firms and their organizational structures as to how much money are set aside for R&D and the development of AI tools.

*“We operate more like a consulting company and reinvest annual earnings into the company. A lot of capital is allocated to R&D which drives a digital change since we invest to be at the forefront of legal digitalization. This set us apart from the traditional law firm which distributes a high percentage of earnings as dividends to partners.”*

- Associate; Data Protection and Commercial Agreements

The business model and by extension in-house R&D allocated towards the development of AI-solutions seem to influence AI usage.

*“The biggest difference, perhaps, is that we develop our own technology as well. We have lawyers who also develop, and we have built our own AI solutions. There is no other law firm doing something similar I would say.”*

- Head of Digital Services

In addition to R&D, having a price model centered around fixed prices instead of billable hours is expressed as imperative when working with offering AI solutions to clients for law firms.

*“We work with fixed prices, not with the traditional hourly rate. We have built services around having fixed products at fixed prices and we are constantly trying to work towards that.”*

- Head of Digital Services

## **5.6 Regulations**

Moreover, law is complex and highly regulated. The Swedish Bar Association advocates good legal ethics and has imposed certain regulations. For example, a law firm cannot engage

financially in clients' businesses. This rule, broadly speaking, prevents law firms to own equity in client companies or to manage client funds in certain contexts, partially to avoid conflicts of interest (Sveriges Advokatsamfund, 2016).

*"We have a clear no from the Swedish Bar Association as law firms being able to own tech-companies and selling equity in those companies to investors. However, you can invest in legal-tech companies, and own legal-tech companies, but not as a client company."*

- Partner & Head of Innovation; Capital Markets & Public M&A

Law firms tend to be labeled as conservative, but it appears that it is not entirely self-inflicted. The Swedish Bar Association consolidates the conservatism through its regulations.

*"The conservative Swedish Bar Association prohibits you from doing certain things. A law firm in Sweden is not allowed to own anything, you can't invest or raise money to invest."*

- Head of Digital Services

## **5.7 The Future of AI in Business Law**

As a consequence of AI just recently becoming a reality for law firms, the respondents were speculating about the future. The potential of lost jobs in the industry is discussed by several respondents and junior associates might not be needed to the same extent as more repetitive tasks disappear with the use of AI.

*"You won't need as many junior associates anymore. Client requests become much more complex with digitalization. It will lead to a more stimulating job and the more repetitive tasks will disappear."*

- Former Associate M&A, Current PhD Student.

Another respondent claim that assistants and paralegals rather than associates are at risk of losing their jobs in the future.

*"Law firms might become smaller and some professions, for example paralegals and assistants will lose their jobs in the foreseeable future. Presumably, administrative job positions rather than lawyers will lose their jobs."*

- Associate; Mergers & Acquisitions.

Even so, not even assistants themselves seem to be especially worried but rather view AI tools as facilitating their work.

*"I do not experience any worry among other legal assistants or lawyers to for that matter. I rather believe that the AI tools we use and will use in the future will facilitate our work here at the firm."*

- Legal Assistant

The respondents state that there are a lot of tasks an AI tool cannot perform. That is for example more analytical work.

*“The analysis itself won’t disappear. Neither will formulated advice to the client. I don't think an AI could write good legal advice nor deliver a piece of advice.”*

- Senior Associate; Intellectual Property, Marketing Law, Media Law and IT & Telecom

The tasks AI tools can perform will increase with time but as the industry itself can control to what extent AI is being used, the progress might be slower than with more external pressure from clients.

*“There will be a much larger element of AI in what we do but I think so far it is up to us to decide how much of an element it should be. Clients have not put pressure on us to use it and our industry is controlled by our clients to a large extent.”*

- Senior Associate; Mergers & Acquisitions

One respondent state that the emergence of AI will force law firms to look over their business model and how to run their operations.

*“From a B2B point of view the market will be different. I'm pretty positive about it because I think it's fun and good. Some business models will not work, and it will affect the company structure and the number of employees. We will have to adjust our pricing. I see moving forward that you are paying more for the high-end services and less for the normal products.”*

- Partner & Head of Innovation; Capital Markets & Public M&A

Moving on, no respondent expressed any worry about their own future as lawyers because of the emergence of AI. Several respondents claim that lawyers always will be needed.

*“It will definitely come. When and how I’m not worried about. Lawyers will always be needed whatever amount of AI that exists.”*

- Associate; Banking & Finance

*“Being a lawyer, as a profession, will not disappear because of AI in 50 years. The work is still too complicated.”*

- Head of Digital Services

Rather, positivism was expressed towards AI tools as they relieve lawyers’ workload. Especially as it is difficult to catch up with all the work as it is today.

*“I am not at all worried about how lawyers' jobs will be affected. On the contrary, we do not have time to do all the things that we should do.”*

- Associate; Public Procurement

Even so, one interviewee claims that AI will not be as sophisticated in the near future that it could eliminate much of the current workload. Rather, AI is viewed as a complement.

*“I do not think that AI tools will be so sophisticated in the near future that it would replace the analytical work. It would rather be that it enables me to streamline my work.”*

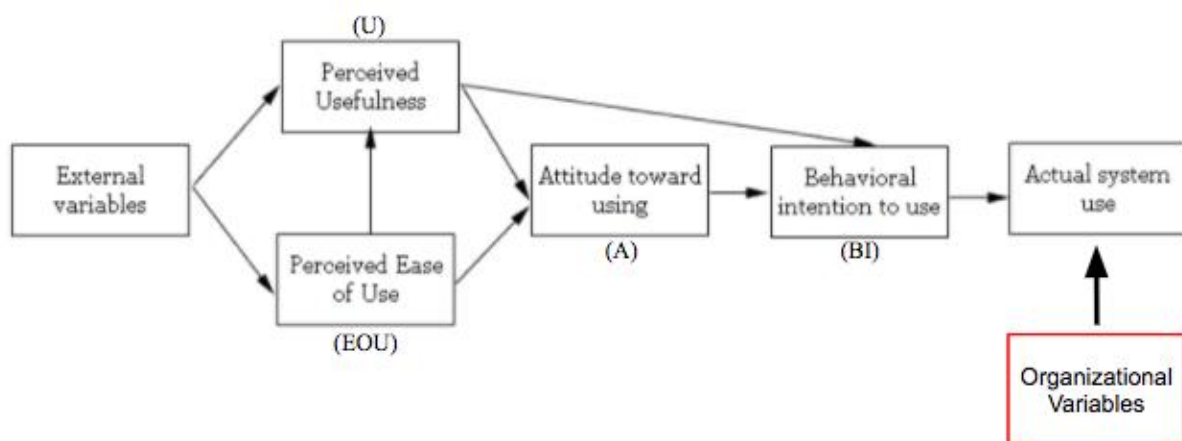
- Senior Associate; Intellectual Property, Marketing Law, Media Law and IT & Telecom



## 6. Analysis

### 6.1 An Extended Technology Acceptance Model

The Technology Acceptance Model explains an individual's acceptance towards new technology, in this case the acceptance towards AI tools being implemented in law firms. However, the gathered empirical data explaining the respondents' acceptance suggest that there are variables explaining individual acceptance outside the scope of TAM. Such variables are not to be confused with the external variables as presented in the original TAM. External variables only comprise variables affecting an individual prospective user's perceived ease of use and perceived usefulness, as implied by the model. However, even though individual acceptance as according to the original TAM would prevail, actual system use may not occur due to circumstantial factors. In line with Weng's (2018) and Ajibade's (2018) criticism of TAM, the authors of this thesis suggest an extended version of TAM in order to enhance the explanatory value of the model by adding variables outside the scope of the original model, defined in this thesis paper as *Organizational Variables*. The below illustration in *Figure 2* includes the addition to TAM where the organizational variables' direct impact on actual system use is shown. Organizational variables are defined by the authors of this thesis as prerequisites within the organization and in the industry that directly impact actual system use, which is the end-result of individual acceptance. Such variables include industry-specific characteristics and the business model of a law firm.



*Figure 2 – An Extended Technology Acceptance Model modified by Tiedtke and Säflund (2020).*

## **6.2 Analysis Overview**

There are an endless number of external variables impacting the perceived usefulness and the perceived ease of use. These two variables constitute the heart of TAM and generate acceptance and actual system use in the end. As suggested in this thesis, there are additional organizational variables that have a direct effect on actual system use as well. The analysis section will be structured accordingly. Moreover, as stated by Ajibade (2018), the attitude toward using and the behavioral intention to use as a part of TAM are merely consequential effects of the perceived usefulness and the perceived ease of use. In line with (Ajibade, 2018) the attitude toward using and the behavioral intention to use are consequential parts of the process generating acceptance and are therefore not treated as independent factors that individually cause such acceptance. Hence, these two variables are not explicitly a part of the analysis section but rather implicitly accounted for.

## **6.3 External Variables**

Derived from the Technology Acceptance Model, an individual must perceive a new technology as useful and easy to use for there to be an acceptance towards the technology. There are an endless number of external variables affecting each of these two variables (Davis, Bagozzi and Warshaw, 1989).

### **6.3.1 Perceived Usefulness**

The perceived usefulness as described by Davis, Bagozzi and Warshaw (1989) has a strong effect on an individual's intention to use technology and is therefore of major interest when explaining how the implementation of AI tools are perceived by the law firm employees in this study. If an individual perceives technology to be useful, it means according to Davis, Bagozzi and Warshaw (1989) that it enhances job performance. As expressed by the respondents, law firm employees are under constant time pressure and have a high workload. Therefore, the individual perception of the tradeoff between how time consuming the implementation and use of AI tools are, versus how high quality-work the tools can produce is a key factor. Most law firm employees expressed that the implementation is time-consuming, and the quality provided by AI tools is not good enough. However, a difference prevails between the traditional law firms and the tech-oriented law firm when it comes to individuals' perceptions of AI's usefulness. The tech-oriented law firm can arguably be considered as having come further in its implementation and recurrent use of AI tools in general, and employees at the tech-oriented firm seem to perceive AI tools as more useful compared to employees at traditional law firms.

### **6.3.1.1 Sub-Conclusion**

The law firm employees develop acceptance towards the application of AI tools if the tools shorten the time required to complete a specific task, and at least maintains, if not improves, the quality of the produced legal work. Meaning it enhances job performance.

### **6.3.2 Perceived Ease of Use**

The perceived ease of use as described by Davis, Bagozzi and Warshaw (1989) has a smaller effect than the perceived usefulness, but still a significant effect on an individual's actual system use. A key determinant of actual system use is how free of effort the usage is (Davis, Bagozzi and Warshaw, 1989). The degree of perceived usage-effortlessness is attached to the steepness of the learning curve when it comes to AI tool-usage. According to the respondents, the perceived effort has to do with to what extent the AI tool's produced work has to be double-checked. The tools themselves turn out to be easy to operate according to most respondents, but what is difficult appears to be how to know what can go wrong. Hence the time it takes to learn how to use AI tools is not as critical as knowing how and when to double-check its results. Some respondents claimed that if they need to double-check most of the work they might as well do it themselves. However, as stated by other interviewees, the tools are easy to use and are more than often a time-saver but there is an uncertainty as to how they actually operate. The lack of understanding has to do with comfort which in the end affects the acceptance.

### **6.3.2.1 Sub-Conclusion**

The law firm employees develop acceptance towards the application of AI tools if usage of the tools is free of effort, and if the employees comprehend the output that the AI tools produce.

## **6.4 Organizational Variables**

TAM explains an individual's acceptance towards new technology, leading to actual system use (Davis, Bagozzi and Warshaw, 1989). However, not all variables explaining an individual's actual system use are due to individual acceptance but are also affected by prevailing organizational variables. The authors have therefore suggested an extended version of TAM, that is the *Organizational Variables'* direct effect on actual system use. Hence, the acceptance among law firm employees will be analyzed based on organizational variables as well, which include industry-specific characteristics and the business model of a law firm.

### **6.4.1 Industry-Specific Characteristics**

Industry-specific characteristics are suggested as one part of the organizational variables having an effect on actual system use of AI tools. Common for all employees interviewed

was that they expressed little worry about their own future as lawyers and for the industry as a whole. Instead, AI was projected to be a complement rather than a substitute of jobs. Even though the law firm employees in this study are mostly positive towards AI in general, some aggravating conditions were expressed concerning the usage. For instance, according to most respondents, the legal industry is characterized by technological conservatism. Further, using an AI tool is associated with different risks that must be disclosed to clients. Not only do the law firm employees themselves have to accept and feel comfortable with using the tools, but their clients may to some extent need to approve of such usage as well. The industry is controlled by clients to a large extent and consequently the expectations of clients are important for the implementation of AI. As business law is subjective with no clear outcome it is more difficult to find benefits with using AI. Concerns were also raised since AI tools depend on large amounts of data that often is classified. As law firms deal with a lot of classified information its employees tend to be risk averse. The conservative industry dimension, a risk averse attitude, data-ownership concerns, and subjectivity all affect individual acceptance, which in the end determines actual system use.

#### **6.4.1.1 Sub-Conclusion**

The law firm employees develop acceptance towards the application of AI tools if the perceived risks with using such tools are considered insignificant and if the use of AI is viewed as a future complement rather than a substitute of jobs.

#### **6.4.2 The Business Model**

The second part of the organizational variables having an effect on actual system use is the business model. The interviews were conducted with people from two different types of law firms; traditional law firms and a tech-oriented law firm. People at both types of firms expressed that conditions having to do with the business model of a traditional law firm were offsetting the implementation and actual system use of AI tools in the end. The pricing model based on hourly billing would reduce turnover for the traditional firm when using AI tools that reduce the number of man-hours needed for a project. Hence, the traditional law firm has less incentives in driving time winnings compared to the tech-oriented firm that uses a different pricing model with fixed prices. Further, when it comes to dividends, partners close to retirement tend to prefer getting his/her share of the earnings right away rather than making reinvestments. As traditional law firms tend to have a business model where a large portion of the net result is paid out as dividends to partners instead of being invested in R&D, less money is allocated towards the implementation of AI. Also, law firms are regulated by the Swedish Bar Association and are somewhat prohibited to raise funding from external investors and to invest in tech-companies. Hence, it is costly to invest in digital solutions for Swedish law firms, which leaves mainly internal capital to be allocated towards R&D. That is capital which is mainly paid out as dividends to partners. If in-house R&D is not conducted, it is more difficult to set up a corporate structure allowing and incentivizing the

implementation of AI. A difference in acceptance can be seen in how employees at the tech-oriented firm tend to be more positive towards the actual use of AI compared to the employees in traditional law firms as their business model better supports and rewards AI usage.

#### **6.4.2.1 Sub-Conclusion**

The law firm employees develop acceptance towards the application of AI tools if R&D is incentivized and facilitated, and if an alternative pricing model not centered around the number of billable hours is applied.

### **6.5 Actual System Use**

As TAM states, the behavioral intention to use determines actual system use (Davis, Bagozzi and Warshaw, 1989). According to Davis, Bagozzi and Warshaw (1989) the behavioral intention is by extension affected by the perceived usefulness and the perceived ease of use and as the authors of this thesis suggest, prevailing organizational variables have a direct effect on actual system use as well. As can be seen in the respondents' statements, the usage of AI-tools ranges from not being used at all, to being used extensively. Among the tools that were mentioned as being used often are Luminance and Kira, which are tools used in due diligence processes. Two other AI tools mentioned were a DPA-tool and an NDA-tool, used to review two common types of agreements. What these AI tools have in common is that they are used for homogenous and recurring agreements of large quantities. According to the respondents, the homogeneity, recurrence and large quantity of the agreements mean that there is a rationale of saving time, which drives actual system use of these tools.

#### **6.5.1 Sub-Conclusion**

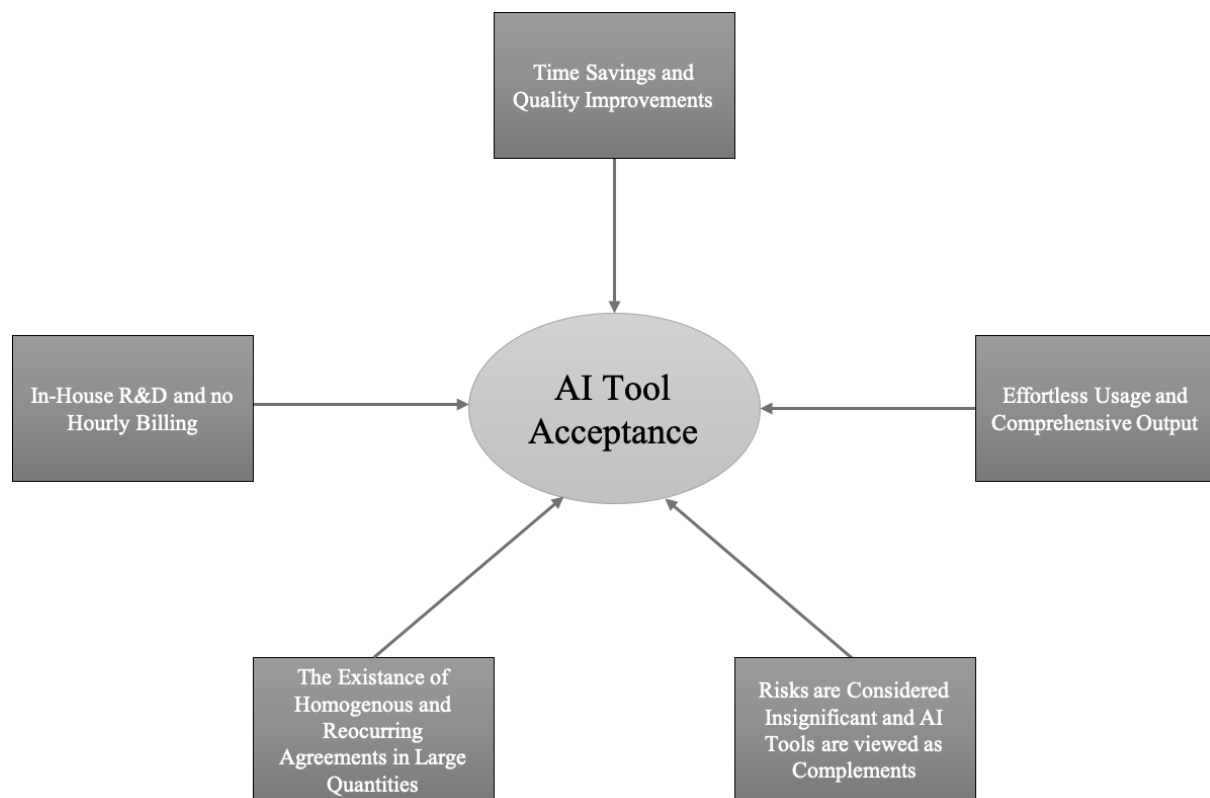
The law firm employees develop acceptance towards the application of AI tools if homogenous and reoccurring agreements of large quantities exist.

## 7. Conclusion and Discussion

### 7.1 Summary of Analysis and Answer to the Research Question

*What causes law firm employees to develop acceptance towards the application of AI tools?*

In this thesis paper, the Technology Acceptance Model has been used in conjunction with empirical data to analyze and provide an answer to the research question above. The five sub-conclusions presented in the analysis section all together provide an answer to the research question. *Figure 3* below illustrates a compilation of the sub-conclusions presented in the analysis section. The figure displays the factors causing law firm employees to develop acceptance towards the application of AI tools.



*Figure 3 - A Compilation of Factors Generating AI Tool-Acceptance* (Tiedtke and Säflund, 2020).

Firstly, the figure illustrates that time savings and quality improvements that enhance employees' job performance lead to acceptance. Secondly, the usage needs to be effortless and the result produced by the AI tool needs to be comprehensive and relevant. Thirdly, if AI is viewed as a complement rather than a substitute of jobs and in addition, the perceived risks need to be considered insignificant due to risk-averse attitudes among employees, data-ownership concerns, and the subjectivity of business law. Fourthly, the facilitation of in-

house R&D and the avoidance of hourly billing are conditions contributing to acceptance. Lastly, the existence of homogenous, reoccurring agreements of large quantities provides a rationale of saving time with the usage and thereby generates acceptance. To conclude, if the conditions presented in *Figure 3* prevail, AI tool acceptance can ultimately be achieved.

## **7.2 Contributions to Research**

There are numerous studies researching adjacent areas to this thesis. Previous research focus on the rise and progression of AI in businesses, what tasks AI can perform in various businesses and how AI is implemented in professional services businesses, and more specifically law firms. There are also a number of studies on acceptance among employees towards new technology. This thesis has aimed to combine these different focus points and, in doing so, has presented findings on what causes law firm employees to develop acceptance towards the application of AI tools.

Interestingly, as suggested by this study and previous research, there are differences between how AI is implemented by traditional law firms as compared to new players (tech-oriented law firms) in the industry. This difference tends to be related to the distinctions between the business model and organizational structure of these two types of law firms. In addition, existing studies focusing on employee acceptance towards new technology in general are highlighting factors such as hierarchical level and job type as influences on acceptance of AI. This study however sheds light on explicit prerequisites regarding the nature of the AI-tools, the industry and the organization, that all influence law firm employees' acceptance towards the application of AI tools. This is what differentiates this study from other adjacent studies.

## **7.3 Contributions to Theory**

The study demonstrates that acceptance among law firm employees also is dependent on other variables not included in the original TAM. Therefore, the scope of the model has been expanded in this thesis by adding an additional variable called *Organizational Variables*. This variable captures factors related to the business model of a law firm and industry-specific characteristics that, according to observed empirical data, have significant influence on AI-tool acceptance among law firm employees. Hence, this thesis contributes to the Technology Acceptance Model by expanding it and thereby adding explanatory value to the model in the context of AI acceptance among law firm employees.

## **7.4 Contributions and Implications for Management**

This thesis highlights a previously less explored area within management research. The study contributes to management by providing indications as for what causes law firm employees to develop acceptance towards the application of AI. This study demonstrates five steps to achieve acceptance towards the application of AI tools among law firm employees. With the use of TAM, the study has added yet one explanatory variable as to explain law firm

employee acceptance towards the application of AI tools. This variable demonstrates that acceptance among law firm employees also is dependent on factors related to the business model of a law firm and industry-specific characteristics. This study presents factors causing law firm employees to develop acceptance towards application of AI and the findings can be used to better understand the transition currently happening in the legal industry when it comes to the implementation and use of AI tools. The importance of achieving employee acceptance when implementing AI in Swedish law firms is highlighted. Conclusively, this study contributes to management research as it informs and advises law firms in implementing AI, by presenting factors facilitating the development of employee acceptance.

### **7.5 Suggestions for Further Research**

Given that the study contains the statements of eleven respondents, the sample is not large enough to achieve a generalizability. With this in mind, the authors of this thesis suggest various approaches to further research on the topic. One suggestion for future research is to conduct a similar study, but with a larger sample to achieve better generalizability. It could be done both through qualitative and quantitative studies in order to establish such generalizability. A geographically comparative study could also be conducted, comparing law firm employees' acceptance in Sweden with law firm employees' acceptance in other countries of interest. Such a comparison could be of interest as there are different prevailing conditions in different countries. Moreover, one suggestion for future research that might be of interest is researching the acceptance of AI among employees in other professional services industries. That is to learn whether the views on adopting new technology among employees differ between separate industries within professional services.

### **7.6 Limitations**

A disclaimer regarding the addition to TAM (Organizational Variables) presented in *Figure 2*, is that this is no more than an extension to TAM based on what the authors of this thesis have identified as cause to better be able to explain acceptance of AI among law firm employees. It should not be confused as a generalizable model of any kind and it is only designed with the purpose of adding explanatory value to this study.

A disclaimer regarding the illustration of the factors causing law firm employees to develop acceptance towards the application of AI tools, *Figure 3*, is that this is no more than a compilation of what causes law firm employees to develop acceptance towards the application of AI tools as identified in thesis and should also not be confused as a generalizable model of any kind.

The study has been conducted only with law firm employees working at Swedish law firms in Stockholm, Sweden. The study is therefore limited to explain circumstances and effects prevailing in Swedish law firms with people living and working in Stockholm. Acceptance is subjective and such perceptions are based on the environment around an individual. Due to



the study being conducted based on law firm employees in Stockholm, the study cannot explain what affects law firm employees' acceptance in general, but rather suggests contextual factors. On that note, this study cannot present any generalizable results as this study only includes the statements from eleven respondents, which is not a big enough sample. There is also a limitation since the previous knowledge about artificial intelligence could differ between the law firm employees interviewed. Such difference in knowledge may influence the respondents' different acceptance levels towards AI. Lastly, the study is conducted using one single theory, TAM, explaining individuals' acceptance towards new technology. Even though the authors of this thesis suggested an addition to the model in order to extend its scope, the extended TAM as presented in *Figure 2* is not exhaustive.

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## **9. Appendix**

### **9.1 Appendix 1 - The Interview Guide**

What AI tools do you use/test or have used/tested?

Are these tools integrated into your daily work?

- If not, why is that?

What do your clients think of you using/potentially using AI?

- Advantages/Risks.

Do the AI tools require mostly human interaction or are they mostly autonomous?

When implementing an AI tool, did you have any training or is it “learning by doing”?

- If so, what kind of training?

What are the incentives for you to actually use the AI tools?

What factors allow you to use more or less AI tools at the firm?

How would you say that the variation and monotony of tasks are affected by these tools?

What are the advantages with the technology?

What are the challenges with the technology?

Does the implementation of these tools have any impact on the total time you spend in the office during an average workday?

How does the overall workload change short-term/long-term?

What do you do with the potential “extra” time you get from using the tools?

- Are the number of billable hours changing?
- Do you have time to work on more cases?
- Do you have more time for team activities?
- Do you have more time for non-client related assignments?

What does the use of AI tools mean for you as a lawyer? Tougher demands or not?

How do you feel that these AI tools affect how stimulating your work is?

How do you think AI tools will affect lawyers' tasks and jobs in the future?

How and what do you personally feel when speculating about the future in relation to AI?

How developed is the legal industry as compared to other industries when it comes to AI and digitalization?

## **9.2 Appendix 2 - AI Tools**

1. Luminance - An AI tool for due diligence processes that reads agreements based on what it has learned and then extracts the data points from which you as a lawyer then make your own assessment.
2. Ayfie - A tool that works so that instead of helping you with a due diligence, the system goes through the data we have access to for you.
3. Kira - Works about the same as Luminance.
4. Raven - Similar attributes but adapted to a different system called iManage.
5. Law Geex - Focuses on specific contract reviews. The tool makes changes that are later reviewed by a lawyer.
6. Business Process Automation, BPA - Used for Non-Disclosure Agreements, NDA.
7. Kroll – n.i.
8. Epiq - Requires access to many documents and helps with which documents you have viewed already. The group specialized in EU & Competition Law uses this tool in dawn-raids when setting up a data room where you go through old emails and documents. That is, when you have to process a lot of data.