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Managerial Interpretations of AI and its Influence on Business Model Innovation

A Multiple Case Study in the Finnish Translation Industry

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ABSTRACT:

In recent years, Artificial Intelligence (AI) has significantly affected traditional industries, prompting managers to reconsider established practises. The translation industry provides a relevant example of a sector strongly impacted by AI, which has enabled the increasing prevalence of self-translation. Responding to changing industry norms is considered crucial, as failure to adapt may result in organizational decline or business failure. In this context, business model innovation (BMI) is often considered an important way for companies to cope with technological change. However, prior research does not provide a unified explanation for why some firms innovate while others do not. One explanation for these differences is managerial cognition, as some studies suggest that a business model primarily represents the management of perceptions.

Although prior research has linked BMI and managerial cognition, qualitative studies on established micro- and small-sized professional service firms remain limited, making the translation industry a relevant context for examining managerial interpretations. Consequently, the aim of this study is to explore how managerial interpretation of AI influence business model innovation in the Finnish translation industry. The focus is on how these interpretations shape the innovation by business model components and the ways in which value is created, delivered, and captured.

This study adopts a managerial cognition perspective to examine BMI. AI is conceptualized as a trigger that managers scan and interpret, leading to either opportunity or threat perceptions, which in turn shape organizational responses – in this case, business model innovation. A qualitative multiple case study design is adopted, and the empirical data consists of semi-structured interviews with six managers from four translation agencies, providing an in-depth insight into managerial interpretations and enables comparison of their effects on BMI.

The findings indicate that opportunity-oriented interpretations of AI lead to BMI or its active planning, affecting how companies create, deliver, and capture value. In contrast, threat-oriented interpretations are associated with the absence of BMI, either due perceived barriers or because AI is not considered immediately relevant to company´s operations. In addition, the findings suggest that contextual factors also influence BMI alongside managerial interpretation. Overall, the study demonstrates that managerial interpretations of AI influence both the scope and nature of BMI in the Finnish translation industry. The findings highlight the importance for managers in professional service settings to critically reflect their interpretations of technology, as these guide innovation-related decisions.

KEYWORDS: business model innovation, managerial interpretation, managerial cognition, translation industry, professional service firms, artificial intelligence

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TIIVISTELMÄ:
Viime vuosina tekoäly on vaikuttanut merkittävästi perinteisiin toimialoihin, mikä on saanut johtajat arvioimaan uudelleen vakiintuneita käytäntöjä. Käännösala on erityisen osuva esimerkki alasta, johon tekoäly vaikuttaa voimakkaasti, sillä sen ansiosta erityisesti itse kääntäminen on yleistynyt. Reagoimista toimialan muuttuviin normeihin pidetään keskeisenä, sillä sopeutustoimien epäonnistuminen voi johtaa yritystoiminnan heikkenemiseen. Tämänkaltaisessa nopeasti muuttuvassa toimintaympäristössä erityisesti liiketoimintamallin innovointia pidetään usein tärkeänä keinona vastata teknologiseen muutokseen. Aiempi tutkimus ei kuitenkaan tarjoa yksiselitteistä vastausta sille, miksi osa yrityksistä uudistaa liiketoimintamalliaan, kun taas toisissa se pysyy ennallaan. Yhtenä selittävänä tekijänä pidetään johtajan kognitiota, sillä tutkijoiden mukaan liiketoimintamalli heijastaa pohjimmiltaan havaintojen ja tulkintojen johtamista.

Liiketoimintamallin innovointia ja johdon kognitiota on aiemmissa tutkimuksissa käsitelty yhdessä, mutta etenkin laadulliset tutkimukset vakiintuneista asiantuntijapalveluita tarjoavista mikro- ja pienyrityksistä ovat jääneet vähemmälle huomiolle tässä tutkimussuuntauksessa. Näin ollen liiketoimintamallien innovoinnin tarkastelu käännösalalla tarjoaa uudenlaisen näkökulman johdon kognition tutkimukselle. Tämän tutkimuksen tarkoitus on selvittää, miten johdon tulkinnat tekoälystä ohjaavat liiketoimintamallien innovointia suomalaisella käännösalalla. Erityisesti tarkastelun kohteena on se, miten tulkinnat näkyvät liiketoimintamallin eri osa-alueiden innovoinnissa, sekä siinä, miten arvoa luodaan, toimitetaan ja ansaitaan.

Tässä tutkimuksessa liiketoimintamallin innovointia (business model innovation) tarkastellaan johtajan kognition näkökulmasta (managerial cognition). Tekoäly nähdään ärsykkeenä, josta johtajat hakevat tietoa johtaen erilaisiin tulkintoihin, ja lopulta joko mahdollisuus- tai uhkatulkintaan. Nämä tulkinnat puolestaan ohjaavat liiketoimintamallin innovointia. Tutkimus toteutetaan laadullisena monitapaustutkimuksena, ja empiirinen aineisto koostuu kuuden johtajan puolistrukturoidusta haastattelusta neljästä eri käännöstoimistosta. Aineisto tarjoaa yksityiskohtaista tietoa johdon tulkinnoista ja mahdollistaa niiden vaikutusten vertailun liiketoimintamallin innovointiin.

Tulokset osoittavat, että tekoälyn tulkitseminen mahdollisuutena johtaa kokonaisvaltaiseen liiketoimintamallin innovointiin tai sen aktiiviseen suunnitteluun. Sen sijaan uhkatulkinnat liittyvät nykyisessä liiketoimintamallissa pysymiseen joko koettujen esteiden vuoksi tai siksi, ettei tekoälyä pidetä tarpeeksi merkityksellisenä yrityksen kannalta. Tärkeä johtopäätös on, että johdon tulkinnat tekoälystä muokkaavat liiketoimintamallin innovoinnin suuntaa ja laajuutta suomalaisella käännösalalla. Tämä korostaa, että asiantuntijapalveluyritysten johtajien on tärkeää pohtia omia käsityksiä teknologiasta, sillä ne ohjaavat innovointipäätöksiä.

AVAINSANAT: business model innovation, managerial interpretation, managerial cognition, translation industry, professional service firms, artificial intelligence

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Abbreviations

BM: business model

BMI: business model innovation

AI: artificial intelligence

1 Introduction

In recent years, technological developments have increasingly reshaped traditional industry structures by challenging existing business logics and redefining sources of competitive advantage (Amshoff et al., 2015, p. 19). As a result, managers across industries are being forced to question their companies' established practices (Casadesus-Masanell & Ricart, 2010, pp. 195-196; Wirtz, Schilke & Ullrich, 2010, p. 286). Among these developments especially artificial intelligence (AI) has gained attention due to its potential to alter business models and established ways of operating.

The translation industry offers a particularly illustrative example of a field in which AI is reconfiguring the industry structure. Traditionally, the translation industry has relied on human linguistic expertise, with professional translators providing nuanced and culturally sensitive communication across languages. However, the widespread availability of AI-based technologies enables fast and low-cost translations, leading translation agencies to view AI as one of the most significant factors influencing their current operations (ELIS, 2025, p. 20).

Reacting to technological developments becomes crucial, as failure to adapt can result in organizational decline or even business failure (Wirtz et al., 2010, p. 273). Prior research suggests that business model innovation (BMI) is vital for companies striving to successfully cope with rapid technological advancements (Bucherer et al., 2017, p. 184; Wirtz et al., 2010, p. 273; Casadesus-Masanell & Ricart, 2010, p. 195). Consequently, business model innovation becomes particularly critical in contexts, where the dominant logic of an industry is being challenged. Therefore, it can be argued that business model innovation is essential for translation agencies seeking to respond effectively to AI-driven change.

Despite the recognition that business model innovation is an effective way to respond to technological change, prior research does not offer a unified explanation for why some companies are able to adapt, while others are subject to organizational inertia within

the same industry. Tikkanen et al. (2005, p. 805) suggest that the business model is a cognitive mechanism and managing it in practice is fundamentally related to management of perceptions. Numerous studies support this claim, noting that managerial cognition plays a powerful role in shaping organizational outcomes (Kaplan, 2011, pp. 682-683; Adner & Helfat, 2003, p. 1012). While the link between business model innovation and managerial cognition has been widely acknowledged, Foss and Saebi (2017a, p. 576), call for more observational and interview-based research to better understand this relationship. Consequently, there remains a lack of qualitative research exploring how managerial interpretations of external disruption influence the scope and focus of business model innovation, particularly how such changes affect specific components and dimensions of the business model.

In addition, existing research examining the impact of managerial cognition on business model innovation has predominantly focused either on large, start-up, or manufacturing and technology-oriented companies, leaving less attention to established micro and small-sized professional service firms (Sjödin, Parida, Palmie & Wincent, 2021; Visnjic Kastalli & Looy, 2013). However, scholars argue, that strategic decision making of managers in small firms differs from that of managers in large corporation, and that smaller firms face greater uncertainty in turbulent environments (Osiyevskyy & Dewald, 2015b, p. 1011). This makes the study of smaller firms particularly relevant.

Taken together, there remains a lack of qualitative insights into how managerial interpretations shape business model innovation in response to AI, particularly in established small- and micro-sized professional service firms.

The purpose of this study is to fill the research gap by answering the following research question:

How do managerial interpretations of AI influence business model innovation in the Finnish translation industry?

The objective of this study is to conduct a multiple case study to examine how managers interpretations of AI impact the scope and nature of business model innovation in the Finnish translation industry. The Finnish context represents a small and clearly bounded language market, providing a focused settings for examining companies operating under similar conditions. The empirical data consists of six interviews with top managers from four Finnish translation agencies, which allows in-depth cross-case comparison between the companies.

The present study contributes to the literature in two ways. First, it adopts a managerial cognition lens to qualitatively examine how managers´ interpretations of AI shape different components and dimensions of the business model. In doing so, the study helps explain why business model innovation develops in different directions and how managers' interpretations shape its scope and focus.

Second, the study broadens existing research beyond its dominant focus on technology-driven and manufacturing contexts by examining responses to AI in traditional knowledge-intensive professional service industry. It highlights the importance of managerial interpretations in contexts where established ways of operating are increasingly challenged by technological change. Moreover, by focusing on micro-sized and small enterprises—organizational forms that remain underrepresented—the study extends empirical knowledge beyond large corporations and start-ups.

This thesis is structured into five main sections. Following the introduction, section 2 provides a literature review, which discusses the research-relevant literature and ultimately synthesizes it into theoretical perspectives of this thesis, which guide the interpretation of the empirical data. Section 3 then presents the methodology, including a detailed description of the data collection and analysis processes. Section 4 reports the empirical findings, beginning with an in-depth analysis of each case individually, followed by a cross-case analysis that identifies similarities over cases. Finally, section 5 concludes the thesis by discussing theoretical and managerial contributions of this

study. The concluding section also outlines the limitations of the study and offers suggestions for future research.

2 Literature Review

The theory chapter is divided into four subsections. It begins with a review of managerial cognition and managerial interpretation literature. The second section examines the business model literature, clarifying the concept and outlining business model components, after which business model innovation is explored in-depth. The third section focuses on the translation industry and the impact of AI on it. The section 2.4 then combines previous sections by synthesizing the literature review and integrating it into the theoretical foundations of this thesis.

2.1 Managerial Cognition

Managerial cognition research has increasingly attracted scholarly attention since 1990s, with the study by Porac, Thomas and Baden-Fuller (1989) about manager´s mental modes shaping the responses to competitive conditions, being one of the first research that contributed to its growing popularity. Generally, managerial cognition is embedded within different managerial fields, rather having developed as a distinct research stream. As managerial cognition has been studied in connection with various managerial fields, it has led to a range of terms, approaches, and concepts within the literature (Kaplan, 2011, p. 665). Thus, the concept of managerial cognition is broad, and it can be approached in a various way. As this study concentrates on manager´s interpretations of AI, the present section addresses managerial cognition at a general level, after which the discussion turns to a more detailed examination of managerial perception and interpretation in the following section.

Generally, managers cognition refers to beliefs and models that serve as a basis for decision making (Adner & Helfat, 2004, p. 1012). Strategic choices represent the idiosyncrasies of decision maker. The givens reflect the decision makers cognitive base, which constitutes of knowledge or assumptions about future events, knowledge of alternatives, and knowledge of the consequences attached to alternatives. These givens filter the decision makers perceptions and responses (Hambrick & Mason, 1984, p. 195).

Thus, the cognitive perspective suggests that subjective interpretations influence organizational responses when manager faces stimuli within or outside the organization (Kaplan, 2011, p. 667; Hambrick & Mason, 1984, p. 195; Nadkarni & Barr, 2008, p. 1397).

Accordingly, scholars have found that cognitive explanations are powerful in understanding different organizational outcomes when examining why some organizations are able to adapt, while others are subject to inertia. Although differences in firm resources and capabilities may lead to different managerial decisions, the mere presence or absence of certain capabilities cannot fully explain organizational inertia (Kaplan, 2011, pp. 682-683; Adner & Helfat, 2004, p. 1020). However, managerial cognition and firm resources and capabilities should not be treated as independent concepts, as especially in the times of radical change, the way how managers interpret the nature and importance of the change, influences the firm´s capabilities and resources mobilization (Eggers & Kaplan, 2009, p. 465).

Another important aspect to consider in the context of managerial cognition is cognitive limits. In other words, bounded rationality prevents managers from developing a complete understanding of their environments, which also affects strategic decision making (Nadkarni & Barr, 2008, pp. 1395, 1397; Wade & Griffiths, 2022, p. 20).

As noticed, managerial cognition literature highlights the role of top management in strategic reorientation (Adner & Helfat, 2004, p. 1022). While the managerial perspective acknowledges that many actors may participate in scanning and data collection, eventually it is the top manager who interprets the information for organizational level action (Nadkarni & Barr, 2008, p. 1396)).

Taken together, mangers´ selective attention, interpretations and perceptions, together with their cognitive base and value system, constitute managers' understanding of a situation (Adner & Helfat, 2003, p 1021). The subjective process of making sense of

events ultimately influences strategic decision making (Eggers & Kaplan, 2009, p. 462; Nadkarni & Barr, 2008, p. 1395).

2.1.1 Managerial Interpretation

Managerial interpretation can be considered part of the managerial cognition literature, with managerial cognition being broader concept that shapes managerial interpretations. Interpretation is the process when data are given meaning (Daft & Weick, 1984, p. 286; Wade & Griffiths, 20222, p. 25). In this phase, cognitive maps play a central role, as managers use knowledge and mental maps to categorize events. Usually – in the research – this event categorization is labelled as potential threat or opportunity. Naturally, these interpretations ultimately influence the organizational actions made in response to the specific event (Sund, 2013, p. 295).

Labelling the event as opportunity or threat is the result of schematic comparison of the event with past experiences, stored in knowledge structures. Thus, characteristics of a given issue are compared with managers cognitive representations of threats and opportunities (Sund, 2013, p. 296). A particular event cannot universally be considered a threat or an opportunity in itself − it is the manager's interpretation that gives the label. Osiyveskyy and Dewald (2015a, pp. 64-65) further divide threat perception to critical and performance reducing. While critical threat refers to the potential loss of entire business for example − bankruptcy, a performance-threat is activated in a case of fear of losses in revenue or profits.

According to literature, managers background and environment are factors that shape interpretation of an issue in addition to cognitive framing (Wade & Griffiths, 2022, p. 29). For example, Daft and Weick (1984, p. 287) propose that managers previous experiences with interpretation can explain differences in interpretations. The same scholars claim that environmental characteristics are one reason to differing interpretations of a certain event, as greater environmental change reduces manager´s ability to analyze the environment.

Scholars argue that interpretation is a three-phased process, with scanning being the first phase. Scanning encompasses seeking information about events and relationships in the external environment, with the aim of identifying changes. Data can be collected through formal processes or through personal contacts. It is recognized that managers differ in their methods and intensity of scanning (Sund, 2015, pp. 590-591; Daft & Weick, 1984, p. 286). The degree of activeness versus passiveness in information searching influences interpretations. In the latter case, decision makers accept whatever the environment presents to them (Daft & Weick, 1984, p. 288). The second phase is interpretation, during which the data is given a meaning and classified as a threat or an opportunity. The third phase, in turn, is action. In this phase organizational responses are taken, and interpretations of certain event influences these actions (Sund, 2015, p. 592; Daft & Weick, 1984, p. 286).

To conclude, managerial interpretation is part of broader managerial cognition literature. Through interpretation, managers give meaning to events, usually categorizing the situations as threats or opportunities. This classification, in turn, shapes organizational responses to the situation (Osiyevskyy & Dewald, 2015a, p. 59; Osiyevskyy & Dewald, 2015b, p. 1024).

2.2 The Concept of a Business Model

Business model research has drawn growing attention both from scholars and business press especially since 90´s, which can be explained by the advent of the internet and e-commerce (Zott, Amit & Massa, 2011, p. 1019; Demil & Lecocq, 2010, p. 227). Initially, the interest was directed towards startups and development of innovative models in emerging industries, but since then, the concept of the business model has spread more broadly into industry (Richardson, 2008, pp. 135–136; Schön, 2012, p. 74).

Despite the growing popularity, there is no unambiguous definition of the concept of business model, and scholars in the field define the concept in a variety of different ways

(Foss & Saebi, 2018, p. 11). The diversity of the definitions is more clearly illustrated in Table 1.

A factor complicating the creation of a unified definition is that researchers frequently adopt definitions of the business model that are specific to the aims of their respective studies, resulting in conceptualizations that are difficult to integrate or compare. An additional challenge in synthesizing the business model literature is that it has largely evolved in silos, reflecting the phenomena of interest to individual researchers. Thus, the multitude of conceptualizations has slowed cumulative research (Zott et al., 2011, pp. 1020–1034).

For instance, Casadesus-Masanell and Ricart (2010) aim to present a conceptual framework that distinguishes and connects the concepts of strategy and the business model. In the paper, they define the business model as ”a reflection of the firm’s realized strategy” (Casadesus-Masanell & Ricart, 2010, p. 195). Chesbrough and Rosenbloom (2002), in turn, examines the role of the business model in capturing value from early-stage technology. According to their definition a business model ”creates the heuristic logic that connects technical potential with the realization of economic value” (Chesbrough & Rosenbloom, 2002, p. 529). These examples demonstrate how researchers’ own interests are reflected in the definitions.

However, several studies have sought to systemically clarify both the current state of business model research and its future directions (e. g., Zott et al., 2011; Foss & Saebi, 2018). Although there is no universally accepted definition of the business model concept, several common themes are emerging among scholars. First, the business model is increasingly regarded as a new unit of analysis. Second, it emphasizes a system-level, holistic approach to explaining how firms operate. Third, firm activities play a central role in the various conceptualizations that have been proposed. Finally, business models aim to explain not only how value is captured but also how it is created. (Zott et al., 2011, p. 1019).

Table 1 summarizes different definitions of the business model. The table further demonstrates that business model concept lacks unified definition, showing also the many ways in which the business model can be referred to. For example, Richardson (2008) describes it as a ”*description*”, Afuah and Tucci (2001) as a ”*system*”, Casadesus-Masanell and Ricart (2010) as a ”*reflection*”, and Teece (2010) as a ”*design*” or ”*architecture*”.

Table 1. Different definitions of Business Model.

Author(s), year	**Definition**
Amit & Zott, 2001	”a business model depicts the content, structure and governance of transactions designed so as to create value through the exploitation of business opportunities”.
Richardson, 2008	”*a description* of how a firm does business”. ”The business model provides an intermediate logical structure between the firm´s theory of how to compete and its activities. It serves to complete the description of the strategy.”
Afuah & Tucci, 2001	”A business model can be conceptualized as a *system* that is made up of components, linkages between the components, and dynamics.”
Casadesus-Masanell & Ricart, 2010	”a *reflection* of the firm’s realized strategy”.

	”Business Model refers to the logic of the firm, the way it operates and how it creates value for its stakeholder”
Teece, 2010	” a business model describes the *design* or *architecture* of the value creation, delivery, and capture mechanisms it employs”. ”The essence of a business model is in defining the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit.”
Chesbrough & Rosenbloom, 2002	”A business model creates the heuristic logic that connects technical potential with the realization of economic value”.

As can be noted, the role of value plays central role in most of the definitions. While the business model concept has been characterized using diverse terminology, most often a business model is described in terms of a firm’s value proposition and market segments, the value chain needed to deliver that value, the mechanisms for capturing value, and how these elements are connected in an overall structure (Saebi et al., 2017; Geissdoerfer et al., 2018).

Teece’s (2010) definition: “a business model describes the design or architecture of the value creation, delivery, and capture mechanisms it employs.”, is particularly illustrative example of how the concept of a business model can be approached from the value realization perspective. Teece (2010, p. 191) further argues that the essence of a business model lies in its ability to crystallize customer needs and their willingness to pay, define how the enterprise responds to and delivers value to customers, encourage

customers to pay for that value, and convert those payments into profit through the effective design and operation of the various elements of the value chain. In other words, a business model reflects management's hypothesis about what customers want, how they want it, what they are willing to pay, and how the enterprise can best organize itself to meet those needs and get paid for doing so. This study follows Teece's (2010) definition, because it explicitly frames the business model as management´s hypothesis about how value is created, delivered and captures, which aligns well with the objectives of this study.

Distinguishing a business model from strategy can further help to understand the nature of the business model. Although strategy and business model are closely related concepts that both play a crucial role in firm performance (Zott et al., 2011, p. 1031), it is important to make distinction between them. Zott, Massa, and Amit (2011, p. 1031) highlight that while traditional strategy focuses on competition, value capture, and competitive advantage, the business model emphasizes cooperation, partnerships, and joint value creation, as well as the value proposition and the customer's role. Teece (2010, p. 179) further argues that the business model is more generic than strategy, which involves more detailed decision-making. Overall, while the two concepts are distinct, they are inherently interconnected and must align with each other, as the business model both shapes and constrains strategic choices (Teece, 2018, p. 44).

To sum up, while there is no unified definition to the business model, it can be described as a company´s decision about what customer segment(s) to serve, how to create and deliver value to the customers, how to capture that value and the connection between these elements (Teece, 2010). Strategy, by contrast, is more focused on long-term goals and competitive positioning. While strategy and business model are distinct concepts, they are closely related and together influence a firm's performance.

2.2.1 Business Model Components

While the previous chapter sought to clarify the definition of a business model, the present chapter aims to further clarify the components of a business model. Furthermore, the chapter compares scholars' views on business model components with respect to their similarities and differences.

Despite the agreement on certain core components among the scholars, the number of business model components range from four to ten depending on the researcher's interpretation. Table 2 summarizes the business model components as defined by different scholars. The table shows that although the number of components varies across researchers, most perspectives nevertheless share certain core components. Evidently, most perspectives (Osterwalder & Pigneur, 2010; Schön, 2012; Afuah & Tucci, 2008; Lindgardt et al., 2008; Chesbrough et al., 2002; Johnson et al., 2008) include creation of value and the product or service offering, while also considering customer segmentation as well as the pricing and cost structure.

Table 2. Number of business model components by different scholars.

Author, year	**BM components**	**Number of components**
Afuah & Tucci, 2008	Profit site, customer value, scope, pricing, revenue, connected activities, implementation, capabilities, sustainability, and cost structure	10
Schön, 2012	Geography, customers, product/service offering, customer interaction &	9

	insight, channels, pricing, assets & capabilities, core activities, and partner network.	
Osterwalder, Clark & Pigneur, 2010	Customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure	9
Lindgardt, Reeves, Stalk & Deimler, 2008	Target segment, revenue model, product or service offering, value chain, cost model, and organization	6
Chesbrough & Rosenbloom, 2002	Value proposition, market segment, value chain, cost structure & profit potential, value network, and competitive strategy	6
Johnson, Christensen & Kagermann, 2008	Customer value proposition, profit formula, key resources, and key processes	4

Although researchers share similar views on many core components, some notable differences exist, as shown in the table 2. Chesbrough et al. (2002, p. 534), for instance, include competitive strategy as a component of the business model, emphasizing the importance of gaining and sustaining an advantage over rivals. Similarly, Afuah and Tucci (2008, p. 54) incorporate sustainability as a component, referring to how a firm intends

to maintain its competitive advantage over time. Also, Schön´s (2012) perspective stands out among the definitions, as he sees the nine components as modular elements that can be altered. Schön (2012, pp. 74-75) further argues that substitution of a module can, in principle, enable a fundamental shift in the value creation system within which a company operates, thereby significantly enhancing its strategic flexibility.

In a same way, Osterwalder and Pigneur (2010) argue that a business model consists of nine components, which are much the same as those proposed in Schön's (2012) framework. Unlike Schön (2012), Osterwalder and Pigneur (2010) include the value proposition as a component of a business model, in this way emphasizing the value proposition serving as a driver for customers' choice of one company over another. The nine components of a business model according to Osterwalder and Pigneur (2010) along with a concise explanation of each, are presented in the table below.

Component	**Definition**
Value propositions	The bundle of products and services that create value for a specific customer segment.
Customer segments	The different groups of people or organizations an enterprise aims to reach and serve.
Channels	How a company communicates with and reaches its customer segments to deliver a value proposition. Can be distinguished between direct and indirect channels, as well as owned and partner channels.
Customer relationships	The types of relationships a company establishes with specific customer segments. May be driven by customer

	acquisition, customer retention or boosting sales.
Key resources	Describes assets required to make a business model work. Key resources can be physical, financial, intellectual, or human. Similarly, they can be owned or leased by the company or acquired from key partners.
Key partnerships	The network of suppliers and partners that make the business model work.
Key activities	Things a company must do to make its business model work, and that are required to create and offer a value proposition, reach markets, maintain customer relationships, and earn revenues.
Cost structure	Describes all costs incurred to operate a business model.
Revenue streams	The cash a company generates from each customer segment.

Table 3. Components of the Business Model and their descriptions according to Osterwalder and Pigneur. (Osterwalder & Pigneur, 2010, pp. 20–41.)

Drawing on the nine components of a business model, Osterwalder and Pigneur (2010) have developed a tool, that is widely used both in research and practice. They refer to this tool as Business Model Canvas, which is illustrated in Figure 1. By placing the nine components listed in Table 3 within the canvas, they can be easily compared, and the business model can be effectively visualized.

The tool can guide companies in facilitating business model innovation, as it illustrates the interconnections between the business model components. Consequently, the potential gaps or weaknesses in a new business model are quick to identify. However, the Business Model Canvas is not only useful for innovating new business models, but also for mapping current business models to gain a deeper understanding of company´s functioning.

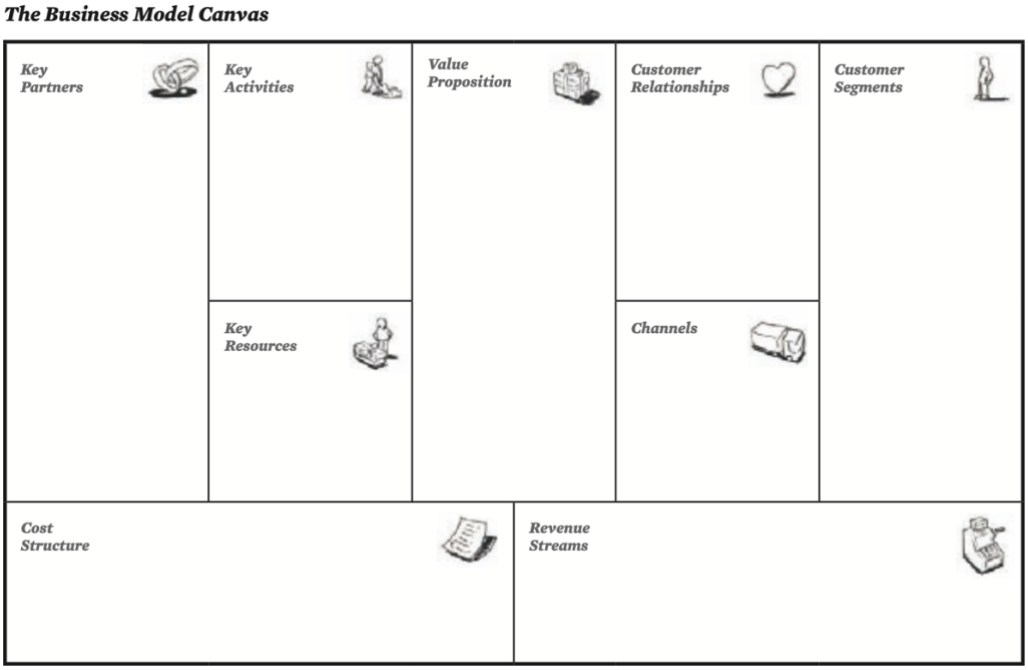

Figure 1. The Business Model Canvas (adapted from Osterwalder & Pigneur, 2010, p. 44).

As this study follows Teece's (2010) definition of business models, which focuses on the value perspective, the components can be further divided into three or four value categories depending on the scholar. Although some researchers consider the value proposition as a separate category (e.g. Kuckertz et al., 2025), in this study, in line with Teece's (2010) definition, three categories are used: value creation, value delivery, and value capture. Table 4 presents the components grouped by category.

Category	Component
Value creation	Value proposition, key partners, key activities & key resources
Value delivery	Customer relationships, customer segments & channels
Value capture	Cost structure & revenue streams

Table 4. Business model components divided into categories.

In summary, the elements that constitute a business model are commonly referred to as business model components, the number and emphasis of which vary across scholars. In this thesis, however, the analysis is based on Osterwalder and Pigneur's (2010) Business Model Canvas, which identifies nine components. These components can be further divided into three categories – value creation, value delivery and value capture, which aligns with the Teece´s (2010) definition of business model. The choice of the Business Model Canvas is justified by the fact that it provides a systematic framework for examining how managerial interpretations of AI affect the company´s business model at a detailed component level.

2.2.2 Business Model Innovation

As observed in the previous sections, the business model concept is subject to multiple definitions and researchers hold different views regarding the components of which business model consists of. It is therefore unsurprising that business model innovation research, being more recent than business model research, similarly lacks an unambiguous definition. Certain conceptualizations emphasize incremental modifications to existing business models, while others highlight more radical and transformative forms of innovation (Foss & Saebi, 2018, p. 12). Certain researchers adopt an even stricter definition of business model innovation, arguing that only business models which are new to the entire industry qualify as business model innovation (for example, Santos, Spector & Van Der Heyden, 2009, p. 14). The ambiguity

in defining BMI seem to stem from the question of how significant a modification needs to be before it is regarded as a business model innovation. To enhance clarity, Table 5 brings together six definitions of business model innovation from different scholars.

Scholar(s), year	**Definition**
Santos, Spector & Van Der Heyden, 2009	"BMI is a reconfiguration of activities in the existing business model of a firm that is new to the product/service market in which the firm operates."
Geissdoerfer, Vladimirova & Evans, 2018	"BMI can comprise the development of entirely new business models, the diversification into additional business models, the acquisition of new business models, or the transformation from one business model to another. The transformation can affect the entire business model or individual or a combination of its value proposition, value creation and deliver, and value capture elements, the interrelations between the elements, and the value network."
Khanagha, Volberda and Oshri, 2014	"BMI activities can range from incremental changes in individual components of business models, extension of the existing business model, introduction of parallel business models, right through to disruption of the business model, which may potentially

	entail replacing the existing model with a fundamentally different one.”
Bucherer, Eisert & Gassman, 2012	”BMI as a process that deliberately changes the core elements of a firm and its business logic.”
Foss & Saebi, 2017a	“Designed, novel, and nontrivial changes to the key elements of a firm’s BM and/or the architecture linking these elements.”
Lindgardt, Reeves, Stalk & Deimler, 2010	“Innovation becomes BMI when at two or more elements of a business model are reinvented to deliver value in a new way. ”

Table 5. Definitions of BMI by different scholars.

As the table illustrates, some scholars (for example, Geissdoerfer et al., 2018; Khanagha et al., 2014) acknowledge that the definition of business model innovation encompasses innovations of varying intensity. Thus, business model innovation may span from incremental modifications to the existing business model to its replacement by a completely novel model. According to definitions presented in the table, the smallest change that can be considered business model innovation involves modifications to at least two components (Lindgardt et al., 2010). In contrast to Lindgardt et al´s (2010) definition, Santos et al.’s (2009) definition indicates that for an innovation to qualify as business model innovation, the business model must be entirely new to the industry. In addition, differences in definitions are further highlighted by, for example, Geissdoerfer et al. (2018) and Khanagha et al (2014), who add that, beyond changes to existing business models, business model innovation may also involve the introduction of a parallel business model.

The comparison of different definitions indicates that there is no consensus among researchers regarding the precise nature of business model innovation. In addition to the differing views among scholars regarding which changes qualify as business model innovation, there is also debate concerning whether business model innovation primarily involves modifications to individual components, the interdependencies linking them or both. However, it can be stated that business model innovation is a novel way of conducting business, which may occur at varying levels of intensity, by modifying individual business model components and/or reconfiguring activities in a new manner.

In this study, business model innovation is approached holistically to encompass incremental modifications to an existing business model, a perspective supported by several scholars (e.g., Foss & Saebi, 2017a; Khanagha et al., 2014; Lindgardt et al., 2010). Furthermore, an innovation does not need to introduce an entirely new business model to the industry to be considered a business model innovation. Moreover, the motivation for business model innovation is not limited to market disruption − changes implemented in response to external challenges also qualify as business model innovation, consistent with prior research (e.g., Geissdoerfer et al., 2018; Foss & Saebi, 2017a).

In light of this, the definition of Foss and Saebi (2017a) – “designed, novel, and nontrivial changes to the key elements of a firm’s BM and/or the architecture linking these elements” – is considered appropriate. The definition is adopted as it recognizes that business model innovation can take different forms, involving either the alteration of individual components, the reconfiguration of their links, or both. According to Foss and Saebi’s (2017a, pp. 216–217), business model innovation can vary in intensity depending on whether it entails changes to individual components (modular) or to the interdependencies between them (architectural). In addition, in their view, business model innovation encompasses both, changes that are new to the firm but not to the industry, and changes that are new to the industry and seek to disrupt existing market conditions.

2.3 Translation Industry

This section examines translation services and disruptive technologies affecting the industry. The first subsection defines translation services and their features from the perspective of professional services. After that, the current state and outlook of the translation industry are reviewed, with the emphasis on ongoing technological disruption affecting the field. The discussion then turns more closely to the disruptive technologies within the translation field, with subsection *AI and translation* focusing specifically on AI and AI-based translation approaches to provide a deeper understanding of their disruptive impact on the industry.

2.3.1 Translation Services—Scope and Characteristics

Translation services can be viewed as part of the broader language industry, which refers to business activities that help individuals and organizations communicate across linguistic and cultural boundaries (European Commission; Association of Language Companies). Specifically, translation refers to the written transfer of text from one language to another while keeping the original meaning, style, and tone (Association of Language Companies).

Translation agencies offer a variety of services, including document translation, subtitling, transcription and localization, which is often applied to websites and software. The agencies serve different clients, for instance, private individuals and institutions across sectors such as education, healthcare, government, finance, law, and technology (Association of Language Companies).

Translation can be classified as professional service, characterized by a knowledge intensity, professional workforce, customization, governance, information asymmetry and intangible nature of services (Kujamäki, 2023, p. 334; Aarikka-Stenroos, 2010, pp. 9-

10, 21-24). The occurrence of typical professional service features in translation services is summarized in Table 6.

Professional service feature	**The presence of the characteristic in translation services**
Knowledge-intensity	Translation requires expertise in translation methods, the target and source languages, technological tools and information search.
Professional workforce	Specific requirements regarding the qualifications and competencies of translators working in professional translation agencies.
Customization	Typically, high degree of customization at the linguistic level.
Governance	Autonomy to execute the translation task, applying the expertise to ensure linguistic and cultural accuracy.
Information-asymmetry	Customers lack the specific knowledge resulting in knowledge gap between the translator and customer.

Table 6. Features of professional services and their presence in translation services (Synthesized from Kujamäki, 2023; Aarikka-Stenroos, 2010; Kumpulainen, 2016).

As the table shows, translation is well described by the characteristics of professional services. Translators require expertise across multiple competencies, such as language skills, translation methods, technological tools, and information search to deliver high-quality, purpose-specific translations. While some administrative aspects, such as scheduling and payment, are largely determined by the client limiting governance control, the core work remains knowledge-intensive and tailored to each client's needs

(Aarikka-Stenroos, 2010, p. 7; Kujamäki, 2023, pp. 336-341; Kumpulainen, 2016, pp. 23-24).

Notably, while there are fewer formal requirements to practice translation compared to fields such as law or medicine (Kujamäki, 2023, pp. 334–335), the translation industry became more regulated in 2015 with the introduction of the ISO 17100 standards (2015), which define the requirements regarding the qualifications and competencies of translators working in professional translation agencies.

To conclude, while translation services correspond to the defining characteristics of professional services, they are rarely classified as professional services in the business literature, partly due to perceptions of being underpaid and undervalued (Aarikka-Steenroos, 2010, p. 11; Samuelsson-Brown, 2006, p. 1). Nevertheless, examining translation services through the lens of professional services highlights the complexity of the work and positions the sector within the broader professional service context.

2.3.2 The Present and Future of the Translation Industry: The Impact of Technological Disruption

Translation industry can be described as fragmented, as most service providers operate either as independent professionals or as small to medium-sized enterprises. At present, the industry is undergoing structural change, forcing independent actors and small to medium-sized enterprises to reconsider their ways of operating. Structural changes of the industry are largely caused by the rapid advancement of technology, which, for instance, influences clients' procurement behavior. On the other hand, large international language service companies are more resilient to change than independent service providers and small to medium-sized enterprises. (ELIS, 2025, pp. 5, 7.)

According to the European Language Industry Survey (2025), the views of freelancers and SMEs regarding the future trajectory of the field are negative, as they expect not only their own activities to decline but also local and global markets. AI and language

technologies are increasingly seen as polarizing the industry, influencing client expectations, diminishing the perceived value of translation agencies, and directly creating pressure to reduce prices (ELIS, 2025). The results are consistent with the Biel and Sosoni´s (2017, p. 354) observation that technological advancement is perhaps the most significant factor influencing the translation industry. The rapid evolution of technology, together with emerging norms in the translation industry—such as maintaining high productivity while keeping costs low—has led translation agencies to engage not only in traditional translation assignments but also in new translation-related activities, including, software and video game localization and multilingual publishing (Biel & Sosoni, 2017, p. 355; Doherty, pp. 956-957). Thus, while technology challenges traditional practices, it can also be seen as an opportunity for translation agencies to introduce new services into their offerings.

2.3.2.1 Disruptive Technologies in The Translation Industry

The concept of innovative technology was first introduced by Bower and Christensen (1995, p. 45), who distinguished between sustaining technologies, which improve existing products or services for current customers, and disruptive technologies, which introduce new attributes initially appreciated by low-end or emerging market segments. As disruptive technologies evolve, they may eventually meet the needs of mainstream customers and displace established market players (Si & Chen, 2020, pp. 3-4). These technologies are characterized by technological and market distinctiveness, altering market performance metrics or consumer expectations by introducing radically new functionalities, discontinuous technical standards, or novel forms of ownership (Guo et al., 2019, p. 252; Si & Chen, 2020, pp. 3-4; Nagy, Schuessler & Dubinsky, 2016, p. 122).

Drawing on this literature, AI emerges as a key disruptive technology in the translation industry, fundamentally affecting the way translation is performed (ELIS, 2025; Mohamed et al., 2024). Therefore, AI is next examined in more depth, particularly from the perspective of translation, by briefly outlining how AI-based translation technology

functions and by providing examples of applications that enable translation without the human translator.

2.3.2.2 AI and Its Effects on Translation

The development of AI can be traced back to the 1950s (Sheikh, Prins & Schrijvers, 2023, p. 28; Radanliev, 2025, p. 1046). Although AI was introduced decades ago, scholars continue to define it in various ways, particularly regarding its boundaries and essential characteristics (Sheikh et al., 2023, p. 28). Kaplan and Haenlein (2019, p. 17) suggest that one reason for this ongoing disagreement is the rapid pace of AI's evolution. However, as Table 7 shows, most definitions share a common reference to human intelligence as the foundation for understanding AI (Kaplan & Haenlein, 2019, p. 17).

Scholar(s), year	**Definition of AI**
Kaplan & Haenlein, 2019	"Ai is a system´s ability to interpret internal data correctly, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation."
Sheikh, Prins & Schrijvers, 2023	"AI is a technology that enables machines to imitate various complex human skills." "-- systems that display intelligent behavior by analyzing their environment and taking actions – with some degree of autonomy – to achieve specific goals."
Bai, Dallasega, Orzes & Sarkis, 2020	"AI is an area of computer science that emphasizes the creation of intelligent machines that work and react like humans."

Nichols, 2024	"Software and/or hardware that can learn to solve complex problems, make predictions or undertake tasks that require humanlike sensing, perception, cognition, planning, learning, communication, or physical action."

Table 7. Different definitions of AI.

Artificial intelligence can be further divided into various techniques, among which machine learning has had a particularly significant impact on translation. **Machine learning** (ML) is the most common type of AI (Sheikh et al., 2023, p. 49), and it can be defined as computer techniques that use algorithms and probabilities to generate inferences from patterns in large data sets, rather than relying on explicit instructions or rules. (Hoffman et al., 2022 p. 10). In other words, machine learning is capable of automatically learning representations from large datasets without human intervention (Radanliev, 2025, p. 1058). In recent years, machine learning has attracted growing scholarly attention, leading to innovations in the field, such as the emergence of deep learning (Sheikh et al., 2023, p. 49; Hoffman et al., 2022, p. 10).

Deep learning is a subfield of machine learning that is based on artificial neural networks. **Neural machine translation** represents a deep learning application in which neural networks are employed to perform translation between languages. Being a subfield of machine learning, neural machine translation systems do not rely on human translators for guidance – instead, they utilize massive amounts of parallel text data to autonomously learn translation patterns and in this way effectively producing reliable translations for various language uses (Mohamed et al., 2024, pp. 25560-25561, 25574). Therefore, neural machine translation systems enable more accurate translations by extending the translation unit to the sentence level, whereas earlier applications before the advent of AI were limited to translating source texts on a lexical or phrasal basis. An example of application that utilizes neural machine translation is DeepL. In addition,

while Google Translate has traditionally relied on statistical machine translation – which required extensive linguistic rules and human input to function – it has largely transitioned to this AI-based approach for the most widely spoken languages, enabling more contextually relevant and natural translations (Liu et al., 2022, p. 2).

The introduction of neural language models in the mid-2010s facilitated the development of **large language models**. Large language models can thus be seen as a subclass of neural language models, since their operation also relies on neural networks and deep learning (Rajaan et al., 2024, p. 26843). However, what distinguishes large language models, from their predecessors is that they are a category of AI models specifically designed to understand and generate human language. An example of technologies that employ large language models is the GPT models, including ChatGPT (Kasneci et al., 2023, pp. 1-2). While these technologies were not originally developed for translation purposes, they are widely recognized for their proficiency in accurately translating various types of texts and have demonstrated high performance in translation tasks (Al Rousan, Jaradat & Malkawi, 2025, p. 2).

To enhance clarity, the hierarchy of AI-based translation approaches is presented in Figure 2, along with example applications.

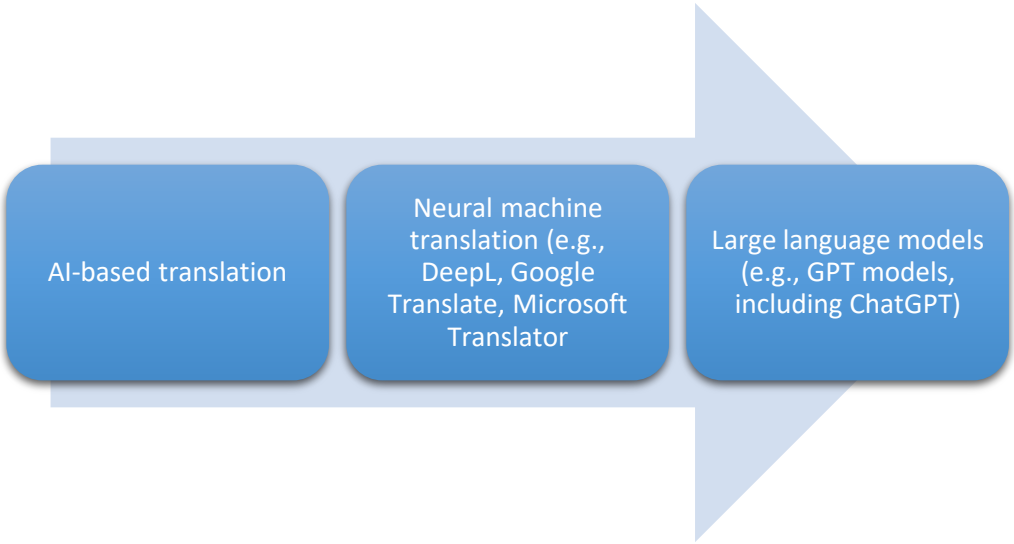

Figure 2. Hierarchy of AI-based translation technologies and example applications.

To sum up, AI-based translation approaches share the key characteristic of functioning without human intervention, relying instead on detecting patterns from large datasets, which fundamentally transforms the process of translation. Consequently, in this study, technological disruption is defined specifically in terms of AI-based translation approaches. As noted earlier, for an innovation to be considered disruptive, it must have distinct characteristics both in technological features and market dynamics (Guo, Pan, Guo, Gu & Kuusisto, 2019; Si & Chen, 2020; Nagy, Schuessler & Dubinsky, 2016). In the translation industry, AI-based translation approaches have already affected the field (ELIS, 2025). Their technological capabilities, combined with their widespread and often freely accessible nature (Liu et al., 2022, p. 2), enable texts to be translated without human translators, potentially disrupting market dynamics, particularly with respect to the demand for human translation services.

2.4 Synthesis – The Influence of Managerial Interpretations of AI on Business Model Innovation

This study examines the role of managerial cognition on business model innovation in the Finnish translation industry. Accordingly, the literature on managerial cognition and

business model innovation are integrated to explore how managerial interpretation of AI influence the development of business model. This chapter proceeds by synthesizing the themes discussed in the literature review and presenting the conceptual lens through which the empirical data will be interpreted.

The literature review first began by the examination of the broader managerial cognition literature and then its subfield—managerial interpretation. Strategic decisions are generally considered reflections of managers' interpretations, which are influenced by their subjective experiences and cognitive bases (Adner & Helfat, 2003, p. 1021; Eggers & Kaplan, 2009, p. 462; Nadkarni & Barr, 2008, p. 1395). Scholars suggests that interpretation is a three-phased process including scanning, interpretation and action (Sund, 2015, pp. 590-592; Daft & Weick, 1984, p. 286). In the interpretation phase, events are typically framed as either opportunity or threat perceptions (Sund, 2013, pp. 295-296). Threat perceptions can be further divided into performance-reducing threat—which is stimulated by anticipated losses—and critical threat—that refers to situation involving a perceived risk of losing the entire business (Osieyvskyy & Dewald, 2015a, pp. 64-65).

After reviewing the literature on managerial cognition and managerial interpretation, the focus shifted to examining the concept of the business model and business model components. While it was noted that the concept of business model is subject to multiple definitions, often reflecting the particular interest of individual scholar, business model is frequently approached from a value perspective. Therefore, the definition of Teece (2010), "a business model describes the design or architecture of the value creation, delivery, and capture mechanisms it employs", which focuses on value perspective, was considered the most appropriate. In the section, which examined business model components, it was also noted that scholars disagree regarding which elements constitute a business model. As already stated, this study employs the definition of Osterwalder and Pigneur, which has gained popularity both in practice and in research. According to Osterwalder and Pigneur (2010), there are nine business model

components, and to align with the objective of this study, they can be further divided into three categories based on the value perspective of the business model – value creation, value delivery and value capture.

After examining the business model literature, the review proceeded to analyze the research on business model innovation. Drawing on the definitions introduced in that chapter, business model innovation can be seen involving both — modifications to individual business model components and reconfiguration of them in a novel way. In addition, by comparing different definitions of business model innovation, it became evident that the main differences arise from scholars' varying views on the intensity of changes required for them to be considered business model innovation. To be precise, in this study, also incremental changes to business model classifies as business model innovation. Accordingly, the modified business model does not need to be entirely new to the industry to be considered as a business model innovation.

As observed, managerial cognition research is often embedded with other research fields, which means that the literature on managerial cognition and business model innovation appear to complement each other and can be easily integrated. According to some perspectives, the business model itself can be viewed as a cognitive mechanism, and managing the business model is, at its core, the management of perceptions (Tikkanen, Lamberg, Parvinen & Kallunki, 2005, p. 805). Managers' interpretations can therefore be seen as strongly influencing how they respond to specific events, and this, in turn, can have implications for business model innovation. Because the literature suggests that the translation industry is particularly disrupted by the rise of AI-based translation approaches, which is seen as driving translation agencies to innovate their business models (ELIS, 2025), this provides an interesting opportunity to examine how managers´ interpretation of AI influences business model innovation.

Based on this synthesis, the following conceptual perspective is applied to guide the interpretation of the empirical findings. Managerial interpretation can be understood as

a three-stage process consisting of scanning, interpretation, and action. In the Finnish translation industry, AI is seen as a trigger from which managers gather information. This is followed by the interpretation phase, in which managers eventually interpret AI either as an opportunity or a threat, which ultimately guides company´s actions.

In this study business model innovation is treated as the action stage of the managerial interpretation process. To enrich the analysis, this study explores in detail how managerial interpretations influence business model development at the level of individual components. Furthermore, the components are grouped into three value categories identified in the literature—value creation, value delivery, and value capture—allowing the study to examine how interpretations influence different areas of the business model. Overall, this approach aims to provide an in-depth understanding of how managers' interpretation of AI determines the trajectory of business model innovation.

However, in the section on managerial cognition, it was noted that firms´ resources and capabilities should not be overlooked when examining the effects of managerial cognition on strategic decisions. Accordingly, this study also considers contextual factors and how managers perceive their influence on the company´s ability to innovate.

3 Methodology

This chapter presents the research methodology. It begins by describing the overall research design, followed by a description of the case company selection process and the selection criteria used. After this, case companies are briefly introduced. Next section then outlines the data collection, which in this study was conducted through semi-structured interviews. The data analysis section then provides a detailed account of how the data were analyzed so it ultimately allowed the research question to be answered. Finally, the reliability and validity aspects and their realization in this study are discussed.

3.1 Research Approach and Method

It is important to select appropriate research methods and to justify these choices, as they influence the type and quality of the results obtained (Saunders, Lewis & Thornhill, 2007, pp. 9-12). The Research Onion developed by Saunders et al. (2007) is a particularly useful tool for conceptualizing the overall research design and understanding how different methodological choices guide the process of answering the research question. It consists of six layers, from which the outermost is research philosophy, after which it proceeds towards the innermost layer in the following sequence: research approach, strategies, choices, time horizon and techniques and procedures. The model thus progresses from general and abstract orientations toward concrete and practical research choices. Together these six layers guide the course of the research.

The outermost layer of the model represents the research philosophy, which defines the underlying beliefs and assumptions about how knowledge is developed and understood (Saunders, 2007, p. 101). Since the purpose of this study is not to produce law-like generalizations, but rather to gain rich understanding on how managers interpretations of AI shape business model innovation, this study adopts an interpretive research philosophy. This research philosophy can be seen suitable for this study, as it emphasizes

the role of social actors and focuses on the creation of meaning (Saunders et al., 2007, p. 106).

The next layer concerns the selection of the research approach. The research can be approached in three different ways: with deductive, inductive or abductive reasoning, from which the latter is combination of the two first mentioned (Eriksson & Kovalainen, 2015, p. 23). In deductive studies, hypotheses and their testing play a central role, with the main emphasis on testing existing theory. In contrast, in the inductive research approach, data is collected, and theory is developed based on the analysis of the data. Research that adopts an inductive approach is particularly concerned with the context in which events occur, which is why a smaller sample of subjects is often more appropriate (Saunders et al., 2007, pp. 118-122). In research, inductive and deductive reasoning are often combined in what is known as an abductive approach. Abduction refers to the process of moving from everyday descriptions and meanings provided by individuals to the development of categories and concepts that form the basis for understanding or explaining the phenomenon under study. (Eriksson & Kovalainen, 2015, p. 23). For this reason, the present study adopts an approach that is rather abductive than strictly inductive or deductive.

The third layer from the outside is research strategy. The choice of research strategy is primarily guided by the research question and the objectives of the study (Saunders, 2007, p. 135; Yin, 2009, p. 10) In this study the chosen research strategy is multiple case study, as case studies are considered as most suitable strategy for studies that aim to explain some present circumstance—often current phenomenon—for example how or why some social phenomena work (Yin, 2009, p. 4). As with all research methods, the purpose of a case study can be descriptive, exploratory, explanatory (Yin, 2009, pp. 7–8). The purpose of this study is exploratory, as it seeks to understand how managers interpret the rise of AI and how these interpretations are reflected in different business model innovation outcomes. Similarly, proceeding to a choice layer, a case study design can be qualitative, quantitative, or a combination of both. Since the aim of this study is

to gain rich insights of managerial interpretation processes and explore the impact of subjective perceptions on business model innovation, a qualitative approach is an appropriate choice, as obtaining in-depth insights would be difficult through quantitative methods. (Yin, 2009, p. 19). Qualitative data is collected through semi-structured interviews, which makes the research choice mono-method. The time horizon can be either cross-sectional or longitudinal. In this study it is cross-sectional as it aims to examine how AI is interpreted and reflected in business model innovation at a particular point in time (Saunders et al., 2007, p. 148).

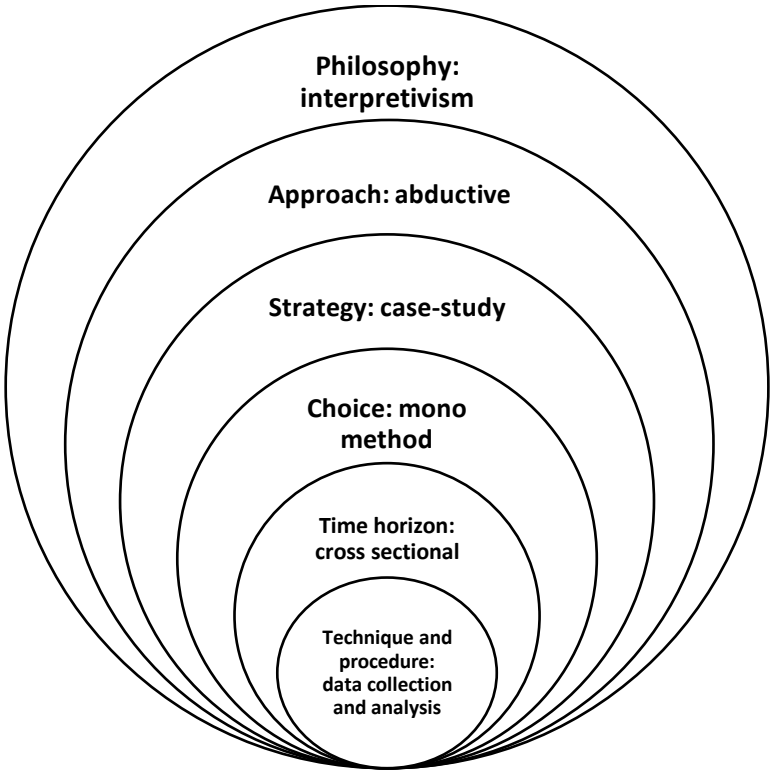

Figure 3. The research onion (adapted from Saunders et al., 2007, p. 102).

3.2 Case Selection

In this study, case companies were selected based on a following criterion. First, all companies are Finnish, they are operating in Finland and serve mainly Finnish customers. In this way the influence of external factors is minimized. However, whether the clients are mainly private persons, corporate clients or the public sector was not a selection criterion to ensure a comprehensive sample. Second, in the language sector, there are agencies that focus on both translation and interpreting. For this study, companies specializing specifically in written translation were selected. This is because technological disruptions affecting interpreting may differ from the technologies influencing written translation. The third criterion was to select companies, as this allows the examination of organizational business models (not for example freelancer translators). Fourth and last criterion was that case companies had to be active both before and after the technological disruption. In contrast, the size of the company was not a selection criterion, as this study aims to provide a comprehensive overview of the Finnish translation sector. Accordingly, the case companies represent a range of sizes, from micro-enterprises to medium-sized companies.

The process of identifying case companies began by examining companies' websites to determine whether they met the criteria outlined in the previous section. After this, potential companies were contacted via email and phone calls. The suitability of each company for the study was further confirmed through discussions with a person in a managerial position within the company.

Thus, four Finnish translation agencies were selected: companies A, B, C, and D. Each case company meets the inclusion criteria of operating in Finland, focusing on written translation services, providing professional translation services, and having experienced the effects of AI-related technological change. The specific characteristics of each company, including size, number of employees, main clients, and core activities, are described in the following subsection.

3.2.1 Case Companies

Company A

Company A is a language service company, which was established approximately 40 years ago. It is a medium-sized company employing between 50 to 100 people and generates annual revenues of over 10 million euros. Although most of its revenue comes from translation, the company positions itself as a language service provider and offers additional services such as transcribing and subtitling. Another part of its business involves developing language technology solutions, including speech recognition software and tools for checking language and translations, which have been part of the business even before the recent widespread of AI.

The company serves a wide range of customers, and its customer base consists of the public sector, including municipalities, the government, and the European Union, as well as corporate clients and international translation agencies for which Company A is also providing subcontracting services.

Company B

Company B is a translation agency, with approximately 40-year operational history. The company employs between one and ten people and in addition, follows the common practice in the translation industry of using freelance translators. With annual turnover of slightly over one million euros, it is classified as a micro-enterprise. The company primarily offers translation services and occasionally editing services. The customer base mainly consists of the public-sector and government authorities. Due to the technological disruption and self-translation, the company is increasingly losing business clients.

Company C

Company C is a micro-sized enterprise reporting to employ fewer than ten people and annual revenues of under one million euros. Besides in-house employees, the company´s operations rely on freelance translators. The company was established approximately 30 years ago, and it specialises in factual texts, as legal documents, annual reports and insurance texts. The company´s primary client is the public sector.

Company D

Company D is a Finnish translation company with 40-year operation history. With one to ten employees and a turnover of approximately half a million euros, the company can be classified as a micro-enterprise. The company´s main service is written translation, and content creation, editing and proofreading are occasionally offered as value-added services. Company D´s main customer base consists of private-sector Finnish companies of different sizes, from SMEs to large corporations.

3.3 Data Collection

In this study, data was collected through semi-structured interviews. Semi-structured interviews are non-standardized (Saunders et al., 2007, p. 312), meaning that although the same main themes and questions are covered in each interview following the semi-structured interview guide, there is flexibility to ask additional questions and engage in discussions that emerge naturally from the topic. Since the author of this thesis and all interview participants were native Finnish speakers, the interviews were conducted in Finnish. The semi-structured interview guide is provided in English as appendix 1.

Each interview began with a brief personal introduction by the interviewer and the topic of the thesis, followed by confirmation of the participant's anonymity and confidentiality, as well as an explanation of technological disruption in the context of this study. The semi-structured interview questions were organized into distinct sections in line with the

research objectives. The first section focused on general questions regarding the company's services and clients, the second on the consequences of the widespread of AI for the translation industry and the company, as well as managerial perceptions and interpretation of AI. The third section aimed to explore the company's business model innovation, with the questions tailored based on the Business Model Canvas. In this way, detailed insights were obtained into how interpretation influences each business model component. At the end of each interview, the topics discussed during the interview were summarized, and participants were given the opportunity to raise any additional topics they considered relevant, thus allowing them to freely share their perspectives in accordance with the purpose of a semi-structured interview.

All interviewees hold decision-making positions within the case companies and are actively involved in business development. This approach ensured that participants have sufficient knowledge about the topic. Total of four interviews were conducted, two of which were joint interviews involving two persons in managerial position from the same company. The joint interviews were arranged at the participants' request, in that way allowing them to ensure accurate understanding of the topics and to jointly provide a rich and multifaceted perspective on the company's business operations and the impact of AI on them. The duration of the interviews ranged from 34 to 51 minutes, and they were conducted either in person or remotely via Zoom. All interviews were recorded with the participants' consent, regardless of whether they were conducted face-to-face or remotely. This approach enabled the transcription of the interview data, resulting in a total of 52 pages of documentation.

Detailed information regarding the interviewees' positions within their respective companies, as well as the details of the interviews, are provided in Table 8.

Table 8. List of interviews.

Company	Interviewee	Title	Interview length	Date	Channel
Company A	A1	Chief services officer	44 min	3.11.2025	Zoom
Company B	B1*	Chief operating officer	49 min	4.11.2025	In person
Company B	B2*	Director of business operations	49 min	4.11.2025	In person
Company C	C1*	CEO/translator	34 min	18.11.2025	Zoom
Company C	C2*	Board member/translator	34 min	18.11.2025	Zoom
Company D	D1	CEO	51 min	27.11.2025	Zoom

* Joint interviews on 4.11.2025 and 18.11.2025.

3.4 Data analysis

As the data were obtained through interviews, the first step of data analysis was transcribing the audios into text format. After this phase, the transcribed documents were reviewed multiple times and notes were made on the main themes from each interview, as transcript summaries facilitate the understanding of emerging issues (Saunders et al, 2023, p. 662). During this stage, particular attention was paid especially to two themes: managerial interpretation of AI and the intensity and scope of business model innovation. As the interview questions regarding the business model innovation were structured based on Business Model Canvas (Osterwalder & Pigneur, 2010), it was

easy to identify what changes had been made to each component of the business model, which made interpreting the interview data simple. The main findings and noteworthy observations are presented in the Chapter 4. As all interviews were held in Finnish language, the quotations presented in the findings chapter were translated by the author of this thesis with an effort to retain their original meaning and style as accurately as possible.

The study follows a typical case study approach by first describing each case individually, which also helps to accelerate cross-case analysis. Within-case analysis is generally descriptive but plays a crucial role in generating insights. The overall idea is to examine each case separately, which in turn allows the unique patterns of each case to emerge before patterns across cases are generalized (Eisenhardt, 1989, p. 540). Thus, in within-case analysis attention was paid to managerial interpretation of AI and its influence on business model innovation in each case separately.

After completing the analysis of each individual case, the research moved on to cross-case analysis, with the aim to identify both similarities and differences across the cases (Eisenhardt, 1989, p. 540). By identifying patterns, this stage allowed to address the research question of how differences in managerial interpretations of AI affect business model innovation among Finnish translation agencies.

3.5 Data reliability and validity

The rigor of the research can be assessed through four concepts: construct validity, internal validity, and external validity and reliability (Yin, 2009, p. 40; Gibbert, 2008; p. 1466). Construct validity refers to the extent to which the research is investigating what it claims to investigate (Gibbert et al., 2008, p. 1466). In this study, construct validity is ensured by creating a theoretical framework based on the relevant literature and following it throughout the data collection and analysis. In the theoretical model, the rise of AI is seen as an external event that disrupts markets. Accordingly, managers´

interpret AI subjectively, which, in turn, influences business model innovation. Together this allows to examine how interpretations affect strategic decision making.

The second aspect of validity is internal validity, which refers to the degree to which the research findings accurately represent the underlying causal relationships (Yin, 2009, p. 40-42). Since this study explores the influence of managerial interpretation of AI on companies' business model innovation, it is crucial to ensure that the identified changes stem specifically from AI-induced disruption rather than from other external factors. To address this, each interview begins with a definition of technological disruption in the context of the translation industry. Furthermore, the interview questions are designed in a way that emphasize AI as a driver of change. In this manner, the interview design minimizes the possibility that interviewees would discuss changes unrelated to technological disruption caused by AI.

The third validity aspect is external validity, which concerns the generalizability of the study. This means that the results should be similar even if the study would be conducted in different settings. The external validity of case studies can be addressed by justifying the sampling and ensuring that generalization from empirical findings to theory is achieved (Gibbert, 2008, p. 1468). Thus, the external validity in this study is supported by including a diverse set of Finnish translation agencies, selected to represent variation in their sizes, translation services and client base, while complying with the sampling logic outlined in section 3.2. In addition, it is equally important to select an adequate number of case companies to ensure the external validity of the research. Generally, a cross-case analysis consisting of four to ten cases is considered sufficient (Eisenhardt, 1989, p. 545). In this study, six managers from four case companies are studied, which is considered enough, especially given that the focus is on the Finnish translation industry where the number of translation companies is relatively small.

Reliability is also an important aspect of ensuring the rigor of the research. Transparency and repeatability are key indicators of reliability, which can be achieved by describing

the research method in sufficient detail so that if the study were conducted multiple times, the results would remain the same. Also, proper documentation of data should be ensured (Gibbert et al., 2008, p. 1468). In this study, all interviews were recorded with the participants' consent and the recordings were transcribed in a consistent manner.

4 Findings

In the findings section, the results of the interviews are analysed. The section is structured into two sections: within case descriptions and cross-case analysis. Each of the four cases is first presented individually, allowing for an in-depth examination of each company´s managerial interpretation of AI and its influence on business model innovation. Following with within-case descriptions, the examination proceeds to cross-case comparison, in which the key findings from each case are brought together. Ultimately, this allows answering the research question *"How do managerial interpretations of AI influence business model innovation in the Finnish translation industry?"*.

4.1 Within Case Analysis

To provide comprehensive understanding of each case, in this subsection cases are examined individually, which is a common practice in case study research. The structure of within case-analysis follows the theoretical perspective presented in synthesis of literature section according to which managerial interpretation process consists of three steps: scanning, interpretation and action.

4.1.1 Managerial Perspective in Company A

The interviewee from Company A, in this study referred as Manager A, holds the position of head of services, actively participating in the service development and the utilization of AI in the service provision.

Scanning

Company A aims to be a forerunner as AI becomes more widespread and therefore Manager A highlights the importance of actively following its development. Manager A states that participating in AI-related seminars and following the industry related

discussion in general are important ways to gather information of the recent AI developments and their effects on the translation industry. In addition, as Company A itself develops language technology solutions, Manager A emphasizes the importance for the company of active engagement in development projects and collaboration with various actors, such as universities.

Interpretation

According to Manager A, the widespread use of AI is substantially affecting the translation sector as clients increasingly demand speed, and, on the other hand, pricing pressures are simultaneously intensifying.

Nevertheless, Manager A perceives the changes brought by AI as an opportunity for the company for several reasons. Especially generative AI is seen to provide the company an opportunity to make operations more efficient and carry out tasks more conveniently than before, which is in line with what the company has long aimed for. Although Manager A has observed that some clients may use AI independently to translate texts, at the same time the development of AI has meant an opportunity to create and offer new kind of services. Therefore, Manager A does not see the growing number of customers using AI themselves threating the company. Thus, while Manager A sees that the development of AI inevitably introduces changes as well, the overall picture remains positive.

> *"Well yes, we indeed see and perceive the changes it (AI) brings as an opportunity, of course, it also brings along changes, so inevitable the role of human changes… it is not an easy shift when people´s work tasks change... "(*Manager A)

> *"Also, the amount of text is growing constantly, so in a way there is more and more material, and, so, they (translations) are demanded faster and faster, so of course AI plays a crucial role in enabling to create translations faster. "(*Manager A)

Action

Thus, Manager A perceives AI as an opportunity for the company to enhance its operations and to develop new services. In line with this view, the business model of the company has been proactively innovated in response to the growing prevalence of AI. These interpretations are reflected in changes across the value creation, value delivery, and value capture dimensions of the business model.

Within the value creation dimension, the use of AI in translation and daily tasks has become one of the company´s key activities. AI proficiency is now regarded as an important skill, and employees are encouraged to use AI in their work tasks. In support of this, training sessions and AI workshops has been held. In addition, the change in value creation is reflected in the company´s efforts to enhance its operations through internal reorganization, allowing increased focus on marketing.

> *"So, we do a lot of work internally, and we encourage all of our employees to use AI to support their work, we have held different training sessions and AI workshops, so we don´t necessarily talk about the translation work, but about the day-to-day activities, and at that time we have experienced many kinds of use of AI important."* (Manager A)

As AI developments are perceived by Manager A as an opportunity to provide customers new kind of services, this has also led to a change in customer relationships, with co-development and partnership now being emphasized. Furthermore, greater effort is currently being placed on communicating AI-enabled service offering to customers. For this purpose, new communication channels and forums have been established to facilitate discussions with clients regarding AI. Thus, positive interpretation of AI has also influenced Company A´s way of delivering value.

> "Now *we have consciously aimed to develop customer collaboration more towards joint development and partnership with the client. "(*Manager A)

> *"For example, now in the autumn we had kind of AI-breakfast to our customers and this kind of forums, which have enabled more in-depth discussions with customers."* (Manager A)

The above-mentioned changes in value creation and value delivery are also reflected in how Company A captures value. AI is interpreted as enabling the provision of new services and more efficient operations, which is also evident in the company´s cost structure. Costs are increasingly allocated to the development of technology and expertise, as well as to customer work. Changes have also occurred in revenue streams, as AI-technology solutions are now developed to customers. As a result, implementation projects and maintenance services have also emerged as new sources of revenue.

Overall, Manager A states that the goal of business model innovation is achieving growth. The objective is to be a strategic partner for a customer and to offer a wider range of services. By doing so, the company seeks to increase the value it provides to clients.

> *"Well, we have aimed to increase revenue, but on the other hand also to enhance customer value, so that we could somehow offer more services to the same client and to be a sort of strategic partner. "*(Manager A)

Manager A sees that the company´s prior technological orientation and earlier investments on technology are important enablers for responding to the rise of AI. On the other hand, Manager A perceives the company´s size and resources as an impediment in responding to AI, requiring compromises on which initiatives to prioritize.

To sum up, Manager A emphasizes the importance of actively scanning AI developments. Manager A interprets AI as an opportunity for the company, as it enables the

development of new services and allows operations to be performed more efficiently through its utilization. The opportunity framing of AI has consequently influenced how the company responds the growing prevalence of AI in the translation industry. The business model innovation is proactive, and the changes are reflected in ways the company creates, delivers and captures value. In particular, the importance of AI-related expertise and the ability to utilize it has influenced how the company creates value. Value is delivered through a new approach to customer relationships, which emphasizes partnership and joint development to offer services that are better tailored to customer needs. In this context, new customer channels have also been established. Ultimately, these changes also affect Company A´s revenue streams and cost structure.

4.1.2 Managerial Perspective in Company B

The interviewees – Manager B1 and Manager B2 – have been involved in the company´s operations for over twenty years. Manager B1 works as a chief operating officer and Manger B2 serves as director of business operations.

Scanning

Both managers' report that they closely follow AI´s effect on the translation industry. The spread of AI and its impact on the industry is followed mainly by participating in AI-related webinars. According to Manager B2, both managers have good networks within the Finnish translation field, and AI is discussed with actors from other companies.

> *"Well, it is somewhat difficult to avoid it (AI), so it´s everywhere and then we participate in this kind of webinars, so of course in this way we try to get (information)… then we have connections with colleague agencies, so through that, there is discussions… "*(Manager B1)

Interpretation

According to the managers from Company B, AI is quickly transforming the translation industry. AI is seen primarily to have impact on two areas: customers are using AI themselves, and AI is intensifying price competition. In addition, the managers believe that AI-assisted translation reduces the quality of translations. Thus, both managers perceive changes brought by AI negatively.

AI is considered profoundly reshaping the market, as they also note that offering quality and collaboration—on which the company has always relied—is no longer enough to maintain a competitive edge. Thus, the managers´ negative thoughts on AI´s effect on the translation industry align with their believe that AI is a serious threat for their company. Both managers expressed doubts about the firm's ability to maintain its position in the industry. On the one hand, larger companies adopt AI themselves, making it difficult to compete with them. On the other hand, customers are using AI to translate documents independently, and due to self-translation, the company is increasingly losing business clients. Overall, as managers perceive a risk of losing the entire business, the threat can be labeled as critical.

> *"As customers are starting to have their own AI, there is no longer need for subcontractors or suppliers, and especially larger business clients have it (AI)."* (Manager B1)

> *"We are no longer needed, in that sense it (AI) is a threat."* (Manager B2)

> *"It has felt quite hopeless, especially regarding procurement decision – oh, oops, how can someone offer this so cheaply, this can´t be even true."* (Manager B1)

Action

Despite the perception that AI-driven changes in the market threatens the company´s operations and reacting to AI is seen as vital, the company has not made any changes to its business model, and the core logic of the business model remains unchanged.

> *"For sure at the theoretical level, we know where we are, where we should be, towards what we should be headed, but we don´t really have that in practice… or sure we have ourselves used some kind of AI and so on, but actually, we don´t yet have the vision of how to apply it (AI) in the business."* (Manager B2)

Both managers see that the company should react strongly to AI, and to adopt AI in their own operations. Although both managers consider reacting to AI strategically important, they perceive several obstacles to business model innovation for their company. These include the absence of resources – especially a lack of in-house IT-expertise is perceived as a constrain. In addition, the perceived threats posed by AI — such as increased price competition, a decline in translation quality, and growing self-translation — conflict with the company´s culture, which has always emphasized delivering high-quality human translations by experienced translators and providing them with fair compensation. Also, the rapid pace of AI development is further seen to complicating company´s ability to respond.

In summary, managers from Company B actively follow AI-related discussions, for example by participating in webinars and by connecting with actors from partner offices. Both managers view AI as a threat, but at the same time perceive several constrains that limit company´s ability to respond strategically. In line with these perceptions, no changes were made to the business model, which continues to focus on traditional human translation services.

4.1.3 Managerial Perspective in Company C

Manager C1, the company´s CEO and Manager C2, a board member, participated in the joint interview. In addition, both perform translation tasks.

Scanning

Monitoring the consequences of AI proliferation on translation industry is not prioritized in Company C, even though both managers see that following AI-related discussion is important. Manager C2 tells, that the discussion on AI is followed in general, as it is an "*interesting topic*", not only to the translation industry, but also in a broader context.

Interpretation

Managers from Company C do not believe that AI would revolutionize the translation industry in the near future, because, in their view, AI is not yet mature enough to translate texts. On the other hand, AI is perceived to have indirect effects on the industry, especially on prices. This has already caused frustration among managers, as customers are increasingly translating texts independently with AI and sending them to the company for proofreading, resulting in a lower total price. In addition, the low prices set by larger translation agencies have impact on pricing across the industry.

> *"I could drop an English expression, "know your enemy", so it is still good to follow the development, even though it´s not welcome, but it´s better to know the threats and be aware of them than bury the head in the sand and pretend nothing is happening. "(*Manager C2)

Thus, the managers attitudes towards AI are ambivalent. AI is interpreted as a threat, but the threats it poses are not seen timely for their company not at least within the five

next years. One reason for this is their client base—the public sector. Nevertheless, Manager C1 states that the AI is an *"frightening topic"*, one that *"is not welcome"*.

> *"So, my answer is that I see it more as a threat."* (Manager C1)

> *"While there have been various scenarios in the head, I believe that within five years – maybe this is naïve – but I think that the translation industry would not change much."* (Manager C1)

The ambivalent attitude is also evident in the fact that AI-based tool is used in Company C, which, according to managers, speeds up the translation process. However, AI is mainly regarded as a tool rather than substitute for human translators.

> *"Inside the house it (AI) has been an advantage, we have been using a tool that enable to get texts (translations) off the table a bit faster."* (Manager C1)

Action

Although AI-based tool is used to support translation in Company C, AI do not otherwise affect the company´s operations. Even though the managers interpret AI as a threat, it is not considered to pose immediate risk for a long time. In line with this interpretation, the company´s business model has not changed, and no adjustments have been made in response to the growing prominence of AI. However, even in the absence of business model innovation, the use of AI as a tool shapes the firm´s value creation process.

> *"I think it (AI) has not affected the way we produce our texts and so on to our customers, so all our service stuff has stayed the same."* (Manager C1)

While responding to the growing prevalence of AI is not seen to be an immediate concern, the managers also state that the company culture, insufficient resources, small

size of the company and customer base mainly consisting of public sector actors, are considered limiting factors for innovation.

To conclude, managers from Company C do not prioritize information seeking about AI in relation to their company, but they follow the general discussion on the topic. The managers attitudes towards AI are somewhat ambivalent. The perceived threat is performance-reducing, as AI is seen as lowering prices in the translation industry, but it is not associated with a risk of losing the entire business. Although AI is generally perceived as a threat, the company itself utilizes it in its daily operations as a tool, shaping the value creation process. However, business model innovation is not considered necessary, as the managers state that AI is not mature enough to pose a direct threat to the company´s operations. Consequently, the business model remains unchanged.

4.1.4 Managerial Perspective in Company D

The interviewee—Manager D—is a CEO of the company and has been closely involved in shaping the company´s strategic direction for over 10 years.

Scanning

Manager D follows AI-related discussion *“as closely as possible”* from various channels, such as news, social media and through discussion and information sharing of different companies. Also, channel of communication with other translation agencies is regarded as important way to track AI´s development. The Manager D also emphasizes the importance of following updates from the AI tool provider used by Company D, as this helps to stay up to date.

Interpretation

Manager D´s perception of AI is to some extent ambivalent. Overall, Manager D sees that the increasing use of AI may lead to a decline in quality and a decrease in the perceived value of texts within the translation industry. So far, the spread of AI has led to reduction in certain assignments, such as internal communication texts, suggesting that some companies are now translating content themselves using AI.

However, Manager D interprets AI as an opportunity for Company D and approaches it positively. AI is considered a useful tool in terms of speed and productivity, producing results that would be impossible to achieve by human translators alone. Another opportunity provided by AI lies in its *"revolutionary"* role in information retrieval, and AI has become as an essential tool for information gathering, taking place of search engines.

> *"Indeed, it is clearly apparent, that it (AI) can produce significant productivity benefits also for us, to our operations and gives opportunities to share those advantages with customers, in that sense that the translation is delivered faster. "(*Manager D1)

Action

Manager D sees reacting to the rise of AI as *"vital"* for their company, although it is not seen as an easy task.

> *"It seems that responding to it (AI) is absolutely necessary, choosing the attitude, the strategy for staying competitive, and also there should be flexibility to change the decisions and direction quickly if it seems that the decisions were not the best possible. "*(Manager D1)

In line with Manager D´s interpretation that responding to the growing prevalence of AI is essential, Company D is currently experimenting with an AI-assisted translation service, where human translators review and edit AI-generated drafts. According to the Manager D, AI is primarily seen as a tool, and its implementation does not affect the company´s core value proposition or main operations. While no substantive business model innovation has occurred to the date, the CEO of the company highlights the ambitions for growth and a shift in customer relationships toward a more consultative role and partnership. The above-mentioned AI-assisted translation service will be priced and marketed in a novel way, but at the time of the interview, the changes were at an experimental stage. As such, the initiative represents a potential business model innovation that would affect the way how Company C is creating, delivering and capturing value. Nevertheless, this new approach would not replace the traditional business model but rather complement it.

> *"I wish that by providing good and effective service and by coming close to customer, we can take a consultative role by striving for service partnership, so that we can in a way act as a consultant and partner, also thinking on behalf of the customer and finding reasonable solutions in this collaboration."* (Manager D1)

The shift is not seen as an easy task, and Manager D states that responding to AI brings certain challenges to the company, including mindset change and learning new skills, particularly regarding AI-based translation technology. As AI is still new and standard practises has not been established, marketing and pricing must be defined independently, and the situation requires new service design adapted to this emerging context. On the other hand, Manager D highlights that the translators are professionals in their own field, and their expertise facilitates the adoption of AI-based technologies.

In conclusion, Manager D actively monitors AI developments through various channels. The CEO of Company D approaches AI positively and views the effectivity benefits AI brings as an opportunity for the company. Manager D has a strong confidence in the new

AI-assisted translation service and its potential success. Overall, the initiative represents potential business model innovation focused on altering key activities and customer relationships, which will ultimately affect revenue streams, as new service would be monetized in a novel way. This would therefore represent a change in how the company is creating, delivering and capturing value. The main challenges relate to the novelty of the approach, as there are no predefined guidelines regarding the approaches pricing and marketing.

4.1.5 Summary of Within-case Analyses

Table 9 summarizes the key findings from the within-case analysis for each case. It presents how actively AI developments are followed, managers interpretation of AI in relation to their company, business model innovation in response to AI, and key contextual factors perceived to affect responses.

Table 9. Summary of within-case analysis findings.

Case	Scanning	Interpretation (opportunity / threat)	Action (BMI)	Components	Dimensions	Contextual factors
A	Active	Opportunity	BMI	Key activities, key resources, customer relationship, channels, revenue streams and cost structure	Value creation, value delivery, value capture	Strong prior technological capabilities, perceived small organizational scale, requiring prioritization
B	Active	Critical threat	No BMI	-	-	Limited resources and IT-expertise, the rapid pace of AI developments
C	Not active	Performance-reducing	No BMI (but AI as a tool)	Key activities	Value creation	Public sector dominated client base, company culture, limited resources, small size of the company
D	Active	Opportunity	Emerging BMI	Revenue streams, key activities and customer relationships (anticipated changes)	Value creation, value delivery, value capture	Organizational culture, perceived uncertainty due to novelty, need for mindset change and new capabilities

4.2 Cross-case analysis

The cross-case analysis brings together findings from the within-case analyses to find similarities and differences across cases. Based on the within-case analyses, the four cases can be divided into two groups: opportunity interpretation and threat interpretation of AI. Managers from the companies A and D belong to the opportunity interpretation group, while managers from the companies B and C interpret AI as a threat. Both subsections follow the same structure as the within-case analyses by first examining scanning, then interpretation, and finally action. Following this, the subsection 4.2.3 discusses identified contextual factors that might influence managerial interpretation and actons taken in response to AI. Finally, the results are synthesized and presented in an empirical framework.

4.2.1 Opportunity Interpretation of AI

Scanning

Both opportunity-oriented managers consider following AI-related discussion as highly important. A common characteristic of these managers is their active monitoring of AI developments through a variety of channels, such as media or AI-related seminars. In addition to following general discussion, the importance of collaboration with different actors is emphasized to stay up to date with AI developments.

Interpretation

Although both opportunity-oriented managers consider that AI has had an impact on the translation industry and report that its growing prevalence has led to a decrease in certain tasks, and in some cases, the loss of clients, they perceive AI as an opportunity for the same reasons. According to these managers, AI enables enhanced efficiency and the provision of new types of services, supporting future growth. Both managers that interpret AI as an opportunity recognize the need to respond proactively to AI.

Action

Thus, opportunity-oriented managers view AI as an opportunity to achieve efficiency gains and enable new types of services by integrating it into company operations. In line with this interpretation, in the two companies, where the manager perceives AI as an opportunity, the business model has either already been innovated, or business model innovation is actively being pursued. Although the extent of innovation varies between these two translation agencies from implemented changes to initiatives still in the experimentation phase, similar patterns can be observed.

Aligned with the interpretation that AI supports future growth through efficiency and new service offerings, business model innovation is approached from technology-oriented perspective by leveraging AI as a tool in internal operations, making its use a key activity.

However, opportunity-oriented managers do not approach AI as an isolated technology, but rather as a driving force for business model innovation. Accordingly, the innovation is rooted in the company's internal use of AI, with changes to other business model elements built around this activity. The adoption of AI is particularly linked to customer relationships, as both opportunity-oriented managers highlight a more consultative role and closer partnership with clients to highlight the human expertise. Thus, opportunity-driven managers demonstrate business model innovation efforts through novel interaction between key activities and customer relationships. Ultimately this also reshapes revenue streams, as providing AI-based services follows different pricing logics.

Overall, it can be concluded that the opportunity interpretation in which AI is seen as enabling efficiency gains and the renewal of the service offering is linked to business model innovation in the Finnish translation industry. Opportunity-oriented managers

adopt a holistic approach to business model innovation, in which value is created, delivered, and captured in new ways.

4.2.2 Threat Interpretation of AI

Scanning

The managers who interpret AI as a threat view the importance of scanning AI and its developments differently. Managers who perceive AI as a critical threat closely follow AI-related developments through various channels, such as participating in seminars and maintaining contacts with colleague translation agencies, while managers that frame AI as performance-reducing, do not prioritize information gathering on AI, even though they consider it important at a general level.

Interpretation

The managers´ threat interpretation of AI is mainly related to its impact on pricing in the translation industry. On the one hand, larger translation agencies that utilize AI offer translations at lower prices, leading to increased price competition. On the other hand, clients are increasingly using AI to translate documents themselves.

Action

In the cases, where managers interpret AI as a threat, no business model innovation has been undertaken in response to these perceived threats. However, a comparison of the cases highlights a difference in how threat perceptions are reflected in organizational responses. In the case in which managers perceive AI as a serious challenge to the translation industry and believe that appropriate actions would be needed to respond to changing industry norms for the company to maintain its position, perceived barriers – such as limited resources and the rapid phase of AI development – are seen as factors

preventing innovation. Consequently, although managers recognize the impact of AI on the company´s operations, business model innovation has not been initiated.

In the other threat-oriented case, managers likewise view AI as a threat, but its relevance to their own company is interpreted differently. In this case, managers do not believe AI would significantly affect their operations in the foreseeable future, but it is still seen as a performance-reducing threat, because of the pricing pressures. Thus, reacting to AI is considered unnecessary at this point of time. As a result, the managers are not planning to innovate and continue to rely on the company´s current business model. While there is no business model innovation, AI-based tool is, however, utilized in translation, which influences how the company is creating value.

Overall, two threat-oriented cases illustrate different reasons for the absence of business model innovation. In the critical threat case, managers actively seek information about AI. It is interpreted as a significant threat, and managers focus on perceived barriers has led to passivity. In the performance-reducing threat case, managers do not actively scan AI developments and do not see business model innovation as necessary, although they still use AI as a tool in daily operations.

4.2.3 Contextual Factors

While the cross-case analysis suggests an association between managerial interpretations of AI and business model innovation, prior literature and the findings indicate that contextual factors are also closely linked to interpretation process. For this reason, they are briefly discussed separately.

Firstly, in addition to interpretation, clientele appear to influence whether managers engage in business model innovation in the Finnish translation industry. In the cases where managers interpret AI as a threat, and business model of the company remain the same, the primary client base consists of public sector organizations. In the public sector, data privacy requirements are strict, which limits the applicability of AI-based

translations. In addition, the public sector organizations do not use AI to translate their documents. As a result, the external environment provides little pressure or incentive for public sector serving translation agencies to innovate their business models. In contrast, in the opportunity-oriented cases, in which managers are actively innovating or pursuing change in addition serve private-sector clients, who are more receptive towards AI-enabled services, which supports business model innovation.

Secondly, resources and capabilities were also perceived as obstacles for business model innovation across cases. In both threat-oriented cases, managers reported limited resources and lack of IT-expertise as barriers to business model innovation. However, one of the opportunity-oriented managers, in whose company innovation is actively being pursued, similarly perceived limited capabilities as a factor complicating business model innovation. This suggest that while such factors may slow down innovation, they do not fully prevent it.

Similarly, this is supported by the observation that, for example, threat-oriented managers perceived an organizational culture emphasizing fair pay for translators as a constrain to business model innovation. In contrast, in an opportunity-oriented case, similar considerations were acknowledged but framed as a challenge requiring a mindset change rather than a barrier. In addition, small company size was mentioned as a challenge in both opportunity- and threat-oriented cases. Overall, this suggests that managerial interpretations determine whether organizational factors are perceived as barriers or as challenges.

As a conclusion, contextual factors, such as primary client base, resources and capabilities, company size and organizational culture shape the conditions for business model innovation. However, managers interpretation of these contextual factors appears to eventually determine whether a company engages in business model innovation.

4.3 Summary of the Findings and Empirical Framework

The cross-case analysis suggests that managerial interpretation of AI influences companies' engagement in business model innovation and its scope in the Finnish translation industry. In general, managers who perceive AI as an opportunity interpret it as improving efficiency and enabling the provision of new services. Accordingly, in these cases, business model innovation is either implemented or actively pursued, particularly by enhancing operational efficiency through the internal use of AI and by adopting a more consultative and partnership-oriented role with the clients. Consequently, this also leads to changes in revenue streams, since AI-assisted services require new pricing approaches. Overall, business model innovation is holistic, as it affects value creation, value delivery, and value capture in opportunity-oriented cases.

In contrast, in threat-oriented cases, managers´ negative perceptions of AI are generally shaped by its role in lowering translation prices. However, threat-oriented managers interpret the implications of AI for their companies differently. In one case, AI is seen as having a significant impact on company operations, making the perceived threat critical. In the other, AI is not perceived mature enough to pose a direct risk to the company´s operations, but due to price pressures the threat can be considered as performance-reducing. In both cases, however, threat interpretation has led to the situation where business model innovation has not been implemented, nor it is being planned. Nevertheless, in the case, where AI is not perceived as posing a direct threat to the company´s operations in the near future, it is still used as a tool that influences how value is created.

Notably, the findings indicate that active scanning of AI developments alone does not automatically lead to opportunity-oriented interpretations or business model innovation. Rather, it is the managerial interpretation of AI that determines the outcome. In the opportunity-oriented cases, active information search led to business model innovation, whereas in the critical threat case, it resulted in passivity despite active scanning. In the case where AI scanning was not prioritized, AI was still perceived as a performance-

reducing threat, and no business model innovation occurred. This highlights that both the presence of information and its interpretation influence managerial responses, but interpretation ultimately determines whether firms act.

Furthermore, the analysis reveals that contextual factors—such as resources and capabilities, organizational culture, company size, and client base—together with managerial cognition, influence engagement in business model innovation in both opportunity- and threat-oriented cases by shaping companies' innovation efforts.

Overall, the comparison between the cases suggests that manager´s interpretation of AI differ considerably, even within the same industry and facing same technological developments. These interpretations shape how firms consider potential responses, with opportunity-oriented managers being more proactive and threat-focused managers either constrained by perceived obstacles or perceiving reacting unnecessary.

Figure 4 presents an empirical framework of the study, which builds on the theoretical foundations of the thesis and is further developed by the results of the cross-case analysis.

In the empirical model, AI serves as a technological trigger, from which managers form interpretations. According to the findings of this study, active scanning of AI developments can lead to either an opportunity or critical threat interpretation, whereas the lack of activity appears to result in a performance reducing threat. Opportunity interpretation leads to holistic business model innovation or to its planning, resulting in changes in the creation, delivery, and capture of value. In contrast, threat perceptions lead to the absence of business model innovation, although a performance-reducing threat still results in changes to value creation. Contextual factors shape interpretation and BMI or its absence in every case. Overall, the framework illustrates the central role of managerial interpretation in how companies within the same industry respond to technological disruption.

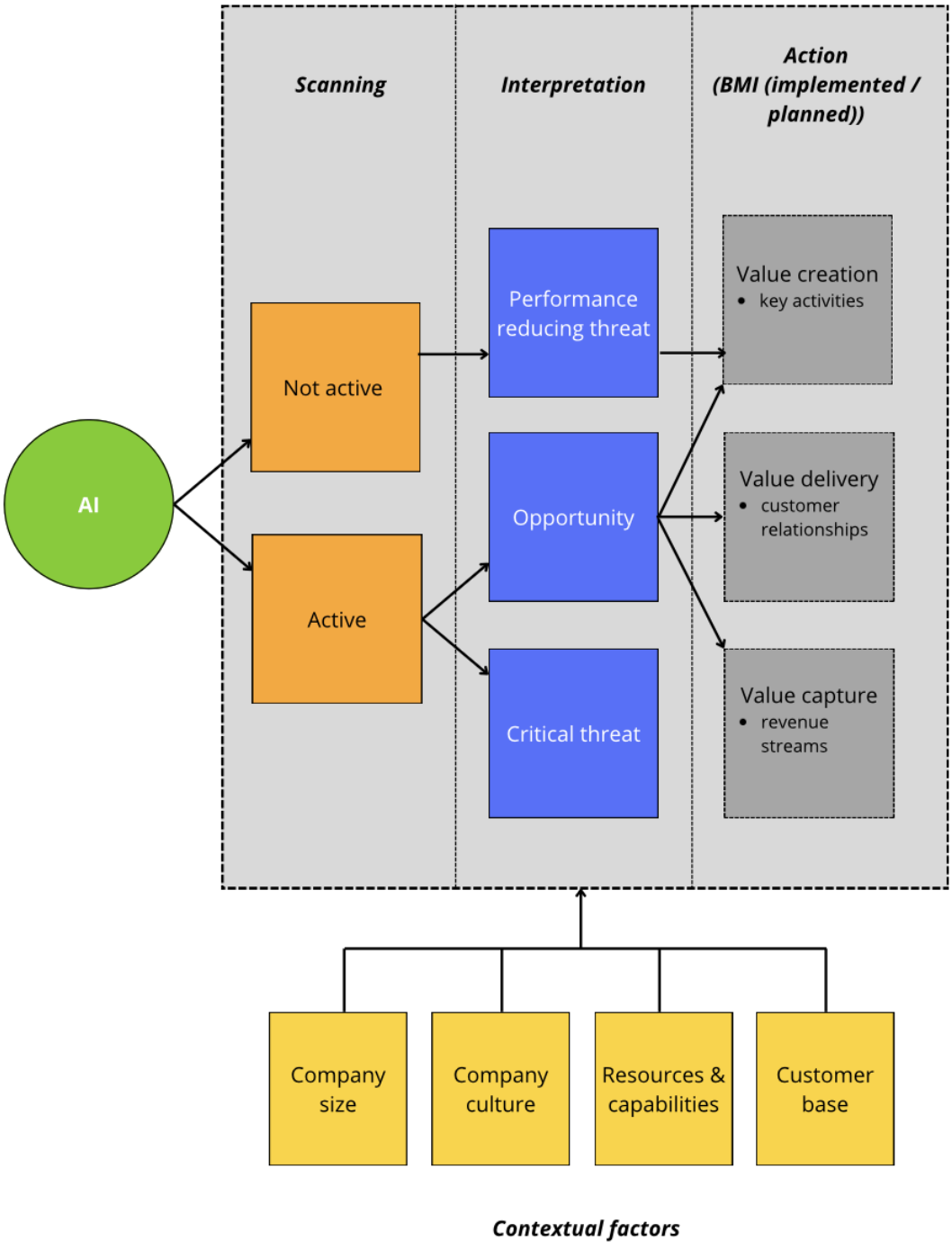

Figure 4. Empirical framework.

5 Discussion

The final chapter of the thesis is divided into four sections. The first section discusses the theoretical contributions of this study. The second section presents managerial implications that may benefit not only managers in the translation industry, but also those operating in professional service settings, especially in industries shaped by emerging technologies. The third section addresses the limitations of this study, and based on these limitations, the final section proposes avenues for future research.

5.1 Theoretical Contribution

The objective of this study was to examine how managerial interpretations of AI influence business model innovation; particularly how managerial interpretation affects specific components and dimensions of the business model. The literature on managerial interpretation, and more broadly on managerial cognition, is often embedded within other management domains (Kaplan, 2011, p. 665), including the literature on business model innovation. While prior research has linked managerial cognition to business model innovation, in the introduction several gaps were identified in this steam of research. In particular, limited attention has been paid to micro and small-sized professional service firms, as well as to qualitative studies exploring how managers´ interpretations of external disruption shape the focus of business model innovation by its dimensions and at the level of specific business model components. To fill this gap, the Finnish translation industry was selected as the empirical context of this study, because the industry predominantly consists of micro and small-sized companies and is undergoing a significant change due to the rapid development of AI.

The findings of this study are consistent with prior research (e. g. Tikkanenen et al., 2005, p. 805; Osiyevskyy & Dewald, 2015b, p. 1024) suggesting that managerial cognition and business model innovation are closely interconnected. The literature on this area, including the present study, often focuses on how the positive (opportunity perception)

and negative framing (threat perception) of events influences business model innovation (Foss et al., 2017b, p. 567).

The findings of this study suggests that opportunistic perception of AI leads to changes in business model. This is consistent with prior research indicating that opportunity perception of external disruption influences managers´ intentions to explore business model innovation, either by fully adopting a new business model or accommodating some of its aspects within the existing business model (Osiyevskyy & Dewald, 2015a, p. 71; Osiyevskyy & Dewald, 2015b, p. 1024). However, this qualitative study extends previous literature by demonstrating more specifically what type of business model innovation opportunity-oriented interpretations lead to in a professional service context. The results indicate that in the Finnish translation industry, companies respond to the growing prevalence of AI by integrating it into its own operations ja by seeking to adopt more consultative role ja partnership-oriented approach with clients. This shift also leads to changes in revenue streams. When examined through the lens of Business Model Canvas (Osterwalder & Pigneur, 2010), these developments are particularly reflected in adjustments to key activities, customer relationships, and revenue streams. Thus, business model innovation is holistic, and affects value creation, delivery and capture.

On the other hand, several studies have also linked threat perceptions of external events to positive effects on business model change (e.g. Osiyevskyy & Dewald, 2015a; Saebi et al., 2017b). For example, Saebi, Lien and Foss (2017b, p. 576) propose that the more severe the external threat, the more likely a company is to adjust its business model in response. Osiyevskyy and Dewald (2015a, p. 71) argue that performance-reducing threat is associated with a disruptive approach to business model innovation. However, a recent study of Zürn, Buder and Unfried (2024, p. 5), provides first experimental evidence suggesting that threat perceptions may instead lead to rigidity. The findings of this study are aligned with the latter perspective, as they indicate that perceiving AI as a threat is associated with the absence of business model innovation. One possible explanation for these results may lie in the industry context and company size. In micro to small-sized

translation agencies, limited resources and dependence on existing client relationships may constrain strategic flexibility, making threat perceptions more likely to trigger defensive reactions rather than proactive business model innovation.

The results of this study also highlight the role of contextual factors alongside the managerial cognition when examining its influence on business model innovation. Prior research has acknowledged that differences between firm resources and capabilities may influence managerial decision-making (Adner & Helfat, 2003, p. 1020), and that especially in the times of radical change, managers´ interpretations determine how these recourses and capabilities are mobilized (Eggers & Kaplan, 2009, p. 465). However, Osiyevskyy and Dewald (2015a, p. 73) called for further research into how organizational factors, such as institutional environment and resource dependence shape managerial decision making. This study contributes to that discussion by demonstrating that in the context of professional service firms, contextual characteristics – particularly client base (public sector vs private sector clients), company size, company culture and technical capabilities – play a significant role on how AI-related changes are interpreted and whether a company engages in business model innovation.

Taken together, this study sheds light on the influence of managerial cognition on business model innovation at the level of individual components and dimensions of a business model in established micro to medium-sized professional service firms. Above all, the findings demonstrate that in this context an opportunistic interpretation of external disruption encourages managers to engage in business model innovation, whereas threat perception – performance-reducing or critical – is associated with its absence.

5.2 Managerial Implications

Based on the findings of this study, several practical implications are offered to managers. While this study concentrates on a specific context of translation industry, the findings may also benefit managers operating in other professional service contexts

characterised by rapid technological change, particularly in micro-sized to medium-sized companies.

Firstly, the findings of this study suggest that managerial interpretations of AI influence business model innovation the companies. While opportunity perceptions are linked to business model innovation, threat perceptions are associated with the absence of it. These findings highlight the importance for managers to recognize and reflect their interpretations of AI or other emerging technologies, as these perceptions guide innovation-related decisions.

Secondly, the interviews further reveal that the case companies—especially those with threat perceptions—often consider responding to AI primarily by adopting it within their own operations to make the operations more efficient. However, it is important to recognize that responding to AI does not solely involve technological adaptation. Business model innovation opens multiple opportunities to create, capture and deliver value in a new way, and responding to AI should not focus only on adopting the technology internally. As the findings suggest, for example, AI adaptation may also support a shift toward closer partnerships and a more consultative role, thereby contributing to the development of customer relationships. Consequently, managers in industries undergoing a technological disruption are encouraged to view business model innovation more broadly and from different perspectives.

Third, the findings highlight the role of perceived challenges to business model innovation. While the analysis demonstrates that contextual factors may influence a company´s ability to respond to emerging technologies through business model innovation, these obstacles should not be interpreted as absolute barriers. Rather, they set the conditions for innovation. Managers should therefore critically evaluate whether perceived obstacles are genuine, as negative interpretations may create a sense of barriers that can hinder innovation.

Together these implications highlight the critical role of managerial interpretations of AI or other emerging technologies in shaping business model innovation. For this reason, managers should reflect and assess their own perceptions of them, as well as consider business model innovation holistically rather than responding to AI merely by adopting it internally to make operations more efficient. Finally, managers should carefully evaluate whether perceived obstacles to business model innovation are genuine or a result of interpretation.

5.3 Limitations

While this study offers insight into the extent to which managerial interpretations of technological developments may influence business model innovation in an industry undergoing technological disruption, certain limitations should be acknowledged. The limitations of this study are primarily related to external validity, particularly due to small size of cases, different company size, and the specific research context.

In general, achieving external validity can be challenging in case study research, as specific empirical sampling is selected and conclusions are drawn based on them. While a cross-case analysis of four to ten cases is considered sufficient (Eisenhardt, 1989, p. 545), the generalizability of the findings could have been enhanced by including a larger number of cases. However, the research focus was narrow, as the Finnish translation industry is small and consists of a limited number of companies, which made access to the interviews challenging.

A second limitation related to the external validity concerns the research context and timing. It should be acknowledged that this study examines the managerial interpretations and responses of translation companies to AI at a specific point of time – if the study were conducted again, the results might differ. Moreover, AI and its increasing adoption is a relatively recent phenomenon, and not all companies have yet responded strategically. This is evident in the case, where business model innovation was still at an initial stage. Moreover, as the one purpose of this study is to gain knowledge

specifically on Finnish translation agencies, the results are only generalizable in the Finnish context. If the study would be replicated in different settings, for example in another country, the results could be different.

In addition, a limitation of this study relates to the company sample, which may affect the generalizability of the findings. Three out of four companies are micro-sized, while one is medium-sized. Differences in company size may influence the availability of resources and capabilities, which in turn can shape managerial interpretations and reduce comparability across cases. However, the Finnish translation industry consists of companies varying sizes, and the sample reflects this diversity.

Beyond external validity concerns, the theoretical choices underlying the study needs to be considered when interpreting the results. As discussed in the literature review, business model research is characterized by differing conceptualizations. For the purposes of this study, Business Model Canvas was considered the most appropriate framework. Accordingly, the interview questions were structured to align closely with the components of the Business Model Canvas. With a different interview question, the interviewees might have described their company's business model innovation differently.

5.4 Suggestions for Future Research

Drawing on the limitations of this study, several directions for future research are suggested. As this study highlights managerial interpretations of AI at a specific point of time, conducting longitudinal research could provide valuable insight into how managerial interpretations of AI change and develop over time. Given that the one case company was still at an early stage of business model innovation, follow-up research could reveal how managerial interpretations and business model innovation evolve in subsequent years.

Another possible avenue for research is to conduct comparative studies across industries with different regulatory environments, client bases, or levels of technological maturity, examining how managerial interpretations influence business model innovation in various contexts. This is relevant because findings of the study indicate that contextual factors influence business model innovation. Research building on these directions could further refine understanding of how managerial interpretations of emerging technologies shape organizational responses in diverse environments.

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Appendices

Appendix 1. Interview guide in English

Introduction by interviewer

- Personal introduction
- Explain the study
- Confirm firm and interviewee anonymity
- Explain what is meant by technological disruption in the present study

Questions

Background information and company overview

1. Could you briefly describe your company's main services and customers? What do you focus on in particular?

2. What is your role in the company? How long have you been in your current position?

Understanding technological disruption and its impacts on translation industry

3. Considering the rise of AI, how would you describe recent changes in the translation industry?

4. How has the widespread adoption of AI affected your clients and their expectations?

Managers' perceptions of technological disruption

5. How closely and in what way your company follows AI developments and their impact on the translation industry?

6. Do you see the changes brought by AI primarily as a threat or an opportunity for your company?

7. Could you give an example of how your company´s perception of AI has influenced business decisions?

8. How important do you consider responding to technological disruption for your company?

Business Model Innovation

- **Customer engagement**

9. Have you changed your value proposition in response to AI-driven market changes? How do you convince clients to choose your services today?

10. Has AI adoption brought changes to the types or groups of clients you serve? Has it created new customer segments?

11. How has technological disruption affected the way you build and maintain client relationships?

12. Have there been changes in how you deliver services or translations? Has AI influenced how you market your services and attract new clients?

- **Business infrastructure**

13. How has the AI-driven market development affected what you consider your company's most important resources and capabilities? Are there particular skills, expertise, or tools you emphasize more?

14. How has AI adoption affected your company's core activities? Have there been changes in which tasks receive special attention in daily operations?

15. Have you formed new partnerships or collaborations in response to AI developments?

- **Financial aspects**

16. How has your company's revenue model changed? Have you adjusted pricing in response to market pressures caused by AI?

17. Has technological disruption shifted the focus of your company's costs? Can you give an example of areas where more or less money is being spent, and why?

- **Summary of Business Model Innovation**

18. How would you briefly summarize the changes made to your business model?

19.What were you intending to achieve with these changes?

20. Would you describe the changes your company has made more as responses to external pressure or as proactive innovation?

- **Barriers and enablers in Business Model Innovation**

21. What factors have facilitated the changes in your company?

22. What challenges or obstacles have your company encountered when making changes to business model?

Closing questions

23. How do you see the translation industry and your company developing over the next five years?

24. Is there anything important that we haven't covered, but that you feel is important?