AI's Current Role in Decision-Making Processes in Swedish Companies -
An exploration study

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Abstract

This thesis explores the integration and impact of Artificial Intelligence (AI) in the decision-making processes of Swedish companies.

AI technologies are advancing rapidly, and organizations are increasingly employing these tools. This study aims to understand how and if AI tools have been incorporated into decision-making processes of Swedish companies. To answer this question, this study uses a qualitative research methodology with semi-structured interviews with executives and decision-makers across various industries. In combination with the interviews, theoretical frameworks are used to analyze how AI has impacted different parts of decision-making processes

The findings indicate that AI significantly amplifies information processing capabilities, thus aiding in the initial stages of the decision-making process, such as problem identification, but also the later stage of generating solutions.

However, the empirical data suggests that AI integration is less influential in the final decision-making stages, where human intuition and judgment play critical roles. This was especially clear when it came to making final choices. This study also emphasizes a cautious but hopeful outlook on future AI integration, with many of the participants anticipating that AI will evolve to have a greater impact on decision-making.

By providing practical insights into the current roles and limitations of AI in decision-making, this study aims to contribute to the academic discussion on AI in decision-making processes.

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1. Introduction

1.1 Background

In today's rapidly evolving digital landscape, the role of artificial intelligence (AI) in transforming organizational decision-making is becoming an intriguing topic of speculation. With recent developments in AI technology it seems possible that these tools could dramatically reshape how organizations strategize, operate and potentially lead to big shifts in business methodologies. The global artificial intelligence market size was estimated at about 197 billion US dollars in 2023 and is, according to a report from Grand View Research, projected to reach a 36,6% compounded annual growth rate between 2024 and 2030 (Grand View Research, 2023). With tech giants like Amazon, Google, Microsoft and Meta investing significantly in the development of AI (Field & Leswing, 2024), these companies are hard at work to make AI more and more suitable for enterprise use cases (Grand View Research, 2023).

Speculation that AI would transform organizational decision-making processes arose even as early as 1991. In "Impacts of Artificial Intelligence on Organizational Decision Making", an article written by Thomas B Lawrence (1991) and published in Journal of Behavioral Decision Making, Lawrence gave a few hypotheses about how AI would impact organizational decision-making, for instance stating in his 10th hypothesis that: "the introduction of expert system technology will produce more fluid and constricted decision processes in the domain of the expert system" (Lawrence, 1991). This essentially means that decisions can be made more swiftly and with less consultation, potentially speeding up organizational responsiveness. Practical examples of this are already starting to show in certain business areas. For instance Ant Financial lets AI approve loans without the need for human involvement in the decision-making process (Iansiti & Lakhani, 2020) and Amazon lets AI autonomously make decisions on product recommendations for customers based on a variety of variables to increase revenue (Morgan, 2018).

According to "The State of AI in 2023," a survey published by McKinsey in 2023, there's been a noticeable increase in how businesses are using generative AI tools. In less than a year after powerful AI-tools like ChatGPT, Dall-E, and Microsoft Copilot was launched, a third of business leaders say their companies are now using generative AI regularly for at least one part of their business (McKinsey, 2023). This change is further underscored in a recent survey published by EY that shows that 43% of companies globally are making investments in AI technology (EY, 2024). Additionally the yearly CEO-survey by PwC showed that about a third of companies (32%) worldwide have recently implemented generative AI tools in their organizations (PwC, 2024).

AI is starting to permeate many parts of our modern society, as is evident by increasing investments. In the case of organizational decision-making a solid case can be made that it might transform the ways companies evaluate and make decisions, especially when dealing with complex and uncertain environments. It is no longer just a supplementary tool as it has the potential to become a core component of the decision-making framework (Trunk et al. 2020). The article "On the current state of combining human and artificial intelligence for strategic organizational decision making" emphasizes that while AI can significantly enhance decision accuracy and efficiency by processing vast amounts of data, it also requires organizations to rethink their structural and operational approaches (Trunk et al. 2020).

1.2 Problem Description

Organizational decision-making is a relatively well-studied field and one that combines the research areas of psychology and organizational theory. Through the years a number of prominent researchers, such as Herbert A. Simon and Daniel Kahneman, among others, have managed to formulate ideas and models on how to interpret and analyze how decisions are made within organizations. However, the advent of artificial intelligence presents a new powerful tool in regards to decision-making and once again opens up a research gap in this field. AI's potential to process and analyze vast amounts of data, among other capabilities, presents exciting opportunities when important and strategic decisions need to be made within organizations.

Additionally, its ability to generate ideas and advice in more menial, everyday tasks might open up new possibilities for smaller types of decisions as well. Some research, such as "On the current state of combining human and artificial intelligence for strategic organizational decision making." by Trunk et al. (2020) has been made in this area, but more efforts are required.

Artificial intelligence is at the forefront of the digital revolution and it certainly has the potential to challenge companies' current way of approaching decision-making (Jarrahi, 2018). As companies and organizations invest more capital into implementing AI into their businesses, one key question that arises is whether current decision-making practices have evolved to fully leverage AI's potential. This is an adaptation that is not just about adopting new tools, it is about rethinking the role of human judgment in the light of AI's analytical power.

The rapidly evolving field of AI and the research gap it has opened up presents a need for practical insights. Most of the latest studies of this field come from consulting firms as the background of this study shows. The issue is that they may have biases and lack practical, on-the-ground perspectives. Additionally, the rapid evolution of the AI field makes it essential to understand the current, real-world applications and impacts of AI technologies. The dynamic landscape underscores the importance of obtaining fresh, unbiased data to assess how AI influences organizational decision-making in companies today. The new technology has the potential to shift the balance between automated analysis and human insight which raises practical questions about how companies have been able to adjust. How much have organizations been willing to trust AI's current ability to assist in decision-making processes and what kind of impact has it had on these processes so far? Have companies taken advantage of AI's capabilities to enhance decision-making or is there still a need for human insights and cognitive thinking when it comes to organizational decision making?

1.3 Purpose

The purpose of this research is to explore how decision-making processes in private Swedish companies have been impacted by recent advancement in modern AI-technology. By analyzing

how these technologies have affected decision-making processes, the study aims to contribute with practical insights to the academic debate and act as an initial indication of how this new technology has impacted organizational decision-making processes in Swedish companies. This study represents an exploration of how decision-making in Swedish companies has been, and possibly will be, affected in an increasingly digitized world.

1.4 Research Question

"How have organizational decision-making processes in private Swedish companies been impacted by new applications of AI technology?"

2. Theoretical Framework

2.1 Definition of AI

In order to accurately answer the research question it is important to first understand what artificial intelligence is and establish a clear definition of the subject. The article "Artificial Intelligence in Service" defines artificial intelligence (AI) as machines exhibiting aspects of human intelligence, utilized increasingly in service sectors to perform tasks traditionally done by humans (Huang & Rust, 2018). The article describes AI as characterized by four types of intelligence: mechanical, analytical, intuitive, and empathetic. Each category represents different levels of difficulty for AI to master, and the progression of AI from performing mechanical tasks to empathetic tasks illustrates its evolving capability.

Another definition of Artificial Intelligence by Brooks (1991) is: "A reasonable characterization of the general field is that it is intended to make computers do things that, when done by people, are described as having indicated intelligence" (Brooks, 1991). This broad characterization avoids the complexities of defining intelligence explicitly, instead focusing on replicating human-like intelligent behaviors through computational means.

However, for the purposes of this thesis, AI (Artificial Intelligence) refers to the application of computer systems capable of performing tasks that typically require human intelligence (Lorica & Loukides, 2016). These tasks encompass a broad spectrum, ranging from basic automation to complex problem-solving, learning, and decision-making. AI technologies include machine learning, natural language processing, computer vision and robotics among others (Lorica & Loukides, 2016). In the context of organizational decision-making processes, AI encompasses the adoption and integration of such technologies to improve decision-making. Specific practical applications from Lorica & Loukides (2016) include:

- Customer service automation with chat bots answering customer service calls, mainly used for deciding relevant answers in relation to routine questions.
- Some examples of AI being used for recommendation systems are brought up: "You don't have to build something with a human voice, like Amazon's Alexa, to be AI. Amazon's recommendation engine is certainly AI. So is a web application like Stitchfix, which augments choices made by fashion experts with choices made by a recommendation engine." (Lorica & Loukides, 2016).
- GPS navigation system for deciding optimal routes and adapting to traffic hazards.
- Making strategic decisions and beating human decision making in strategy games like Go and chess.
- Self-driving cars

(Lorica & Loukides, 2016)

2.2 Decision-Making

In order to understand how organizational decision-making processes have been impacted by artificial intelligence, it is essential to understand different types of decision-making processes and how decisions, both large and small, are made in an organizational context.

2.2.1 Rational Decision-Making Model

The rational decision-making model is a traditional model that outlines the ideal steps decision-makers should follow to achieve the best outcomes in business decisions. The model assumes the decision maker has access to complete information and, without biases, are able to identify all relevant options (Robbins & Judge, 2016). Thus it suggests that decision makers are able to achieve perfect rationality in making decisions. Though perfect rationality, in a realistic sense, is mostly unattainable, the model still provides a solid foundation and baseline for analyzing which areas of decision making processes have been impacted by AI.

According to Robbins & Judge (2016) the rational decision-making model follows six steps that begin with defining the problem or decision that needs attention followed by identifying the key decision criteria. After pinpointing the problem, the next phase involves weighing the importance of the different identified criteria followed by gathering of data in order to develop potential alternatives. From there alternatives can begin to be evaluated and the best option is able to be selected (Robbins & Judge, 2016).

Define the problem	Identify the decision criteria	Allocate weights to the criteria	Develop alternatives	Evaluate alternatives	Select the best alternative
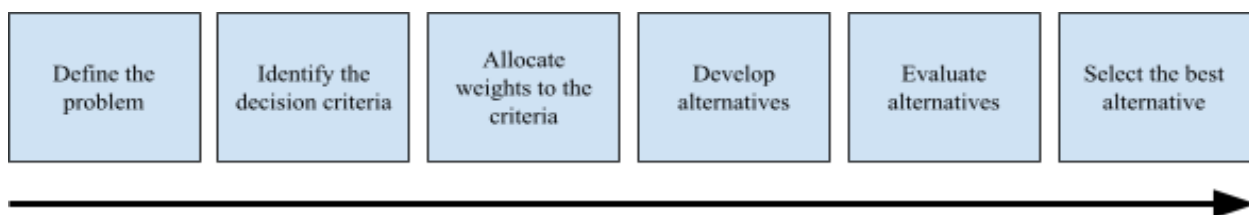
Figure 1 - Rational decision-making model

Defining the problem

The initial step involves a precise recognition and definition of the problem to establish a clear understanding of the issues at hand (Uzonwanne, 2016). This initial step sets the direction for the entire decision-making process, thus an incorrect definition of the problem may cause any subsequent action to be ineffective. The problem needs to be properly understood and defined in order for the decision maker to not do too much or too little to solve the problem.

Identifying the decision criteria

Once a problem is clearly defined in the rational decision-making process, the next step is to identify decision criteria, which are standards used to evaluate alternatives. These criteria might include factors like cost, benefits, time constraints, available resources, and strategic alignment, guiding what is considered relevant in making the decision (Robbins & Judge, 2016). Selecting the right criteria is crucial as it directly influences the effectiveness of the decision-making process.

Allocating weights to the criteria

Allocating weights to the criteria aims to prioritize the importance of various factors that influence the decision. According to Uzonwanne (2016), this step involves defining the importance of each decision criterion, which plays a critical role in the analytical phase where alternatives are evaluated. By assigning weights or values, the decision-maker can ensure that the most significant aspects have a greater influence on the outcome, thereby aligning the decision more closely with organizational goals. This systematic approach helps ensure that decisions are both effective and aligned with the objectives (Uzonwanne, 2016).

Developing alternatives

The step of developing alternatives involves generating a range of possible solutions and exploring different courses of action that could effectively address the identified problem (Uzonwanne, 2016). By meticulously considering various options, decision-makers ensure a thorough evaluation of potential outcomes. This comprehensive approach not only enhances the likelihood of finding an effective resolution but also minimizes the risk of overlooking viable solutions.

Evaluating alternatives

In this phase of the rational decision-making process, each potential solution is rigorously assessed to determine its feasibility and potential effectiveness. This involves a detailed analysis of the advantages and disadvantages of each option, as well as predicting the outcomes based on

the information gathered (Uzonwanne, 2016). The purpose is to ensure that each alternative is thoroughly explored to identify the most effective solution for the situation. This process is critical in making an informed decision that maximizes the benefits while minimizing risks.

Selecting the Best Alternative

Once all alternatives have been evaluated, the next step is to select the best one. This decision is based on which alternative aligns best with the defined goals and which is expected to yield the most favorable outcomes (Uzonwanne, 2016). The chosen option should logically be the one that offers the greatest benefits and has the highest probability of successful implementation. This step ensures that the decision is advantageous, practical, and poised to meet the decision-maker's objectives effectively.

Though the rational decision-making model does provide a great framework for analyzing our research question, it is important to point out its flaws. The primary criticism of this model comes from that it is considered unrealistic. Brunsson (2002) elaborates on how decision makers in reality inevitably face at least three challenges with this model:

- That they only possess a small fragment of the knowledge about each decision's consequences.
- That they only can imagine the outcome of each alternative and not experience it.
- They're not able to think of all possible alternatives for a particular decision

Another critique of the rational decision-making model is the assumption that decision-makers are completely isolated from outside influence. This could for instance be selflessness or considerate behavior (Brunsson, 2002).

2.2.2 Bounded Rationality

Bounded rationality is a concept introduced by Herbert A. Simon (1955) that challenges the traditional idea that people always make perfectly rational decisions. According to this theory, people aim to make rational decisions but are limited by cognitive abilities - such as memory and processing speed - to gather and analyze information (Brunsson, 2002). These limitations mean

that people can not consider every possible option or piece of information, even if attainable, leading them to make decisions that are "good enough" rather than perfect. This behavior is often described by the term "satisficing," combining "satisfy" and "suffice" (Robbins & Judge, 2016). It refers to the process of people seeking a satisfactory solution rather than the optimal one, a common response when faced with complex decisions (Simon, 1955).

In organizational settings, understanding bounded rationality and the concept of satisficing is essential for designing processes that aid decision-making. Organizations develop structures such that bounded rationality assumes a structured and linear decision-making process, which may not reflect the often chaotic and heuristic nature of real-world decision-making.

2.2.3 Intuitive Decision-Making Model

The idea of intuitive decision-making, often talked about as the opposite to the rational decision-making model, relies on experience, holistic associations and links between different pieces of information (Robbins & Judge, 2016). As the name suggests this type of decision-making draws from intuition in order to make faster decisions. It taps into the brain's ability to quickly gather and use different clues without the need for thorough reasoning or in-depth analysis, often relying on what we've learned through experience and our subconscious. Gigerenzer (2007) refers to this as the "intelligence of the unconscious," a type of mental efficiency that manages complexity using simple shortcut rules. These shortcuts, developed through frequent exposure to similar situations, help people react both quickly and accurately in ways that detailed logical processes cannot always achieve (Gigerenzer, 2007).

In his seminal work "Thinking, Fast and Slow", Kahneman (2011) further elaborates on this model of decision making. He delineates two systems of thought: System 1, which is fast, instinctive, and emotional; and System 2, which is slower, more deliberative, and more logical (Kahneman, 2011). Kahneman argues that System 1 often governs our decisions, using shortcuts known as heuristics to operate efficiently, though sometimes at the cost of accuracy (Kahneman, 2011). Heuristics, as he explains it, are simple, efficient rules which people often use to form

judgments and make decisions. These rules work well under most circumstances but can lead to systematic deviations from logic, probability, or rational choice theory (Kahneman, 2011). The reliance on heuristics is a hallmark of System 1 thinking, which operates automatically and quickly with little or no effort and no sense of voluntary control. Heuristics help in navigating complex environments by simplifying the decision-making process, although they can sometimes lead to cognitive biases and errors (Kahneman, 2011).

System 1 and System 2, as Kahneman (2011) describes, embody the dual-process theory of the mind. System 1 is fast, instinctive, and emotional, enabling quick responses and decisions with minimal cognitive load. This system efficiently handles everyday decisions and familiar tasks by drawing on learned associations and experiences. However, its reliance on heuristics can sometimes lead to oversimplified thinking that might not be fully accurate (Kahneman, 2011). On the other hand, System 2 is slower, more deliberative, and more logical. It requires conscious mental effort, often kicking in during tasks that require focus and complex reasoning. System 2 processes are methodical and cautious, aiming to minimize errors and refine the quick judgments made by System 1. The interaction between these two systems allows for a versatile range of human behaviors, from rapid response to thoughtful analysis, each suited to different types of challenges and decisions (Kahneman, 2011).

Despite its advantages in speed and operational efficiency, Kahneman (2011) also highlights the pitfalls of intuitive decision-making, such as overconfidence and biases, which can lead to systematic errors. These errors occur because System 1's fast and frugal nature does not always consider the full breadth of information necessary for optimal decision-making (Kahneman, 2011).

2.3 Human & AI-Interaction

Considering the dynamics between humans and AI in decision making processes is an important aspect to take into account in this research. In the paper "Artificial Intelligence and the Future of Work: Human-AI Symbiosis in Organizational Decision Making," Mohammad Hossein Jarrahi

(2018), considers AI's increasing role within organizational decision-making processes. He aims to moderate the usual fear of AI replacing roles that humans take up with a balanced perspective on the notion of human-AI symbiosis (Jarrahi, 2018). Jarrahi distinguishes between two decision-making methods in organizations: analytical and intuitive. AI's computational power for analysis perfectly complements human intuition and creativity, especially in situations loaded with many uncertainties and complexities. While AI is excellent at processing gigantic amounts of data and pattern identification, humans bring valuable insights and a holistic perspective in a way that is hard for machines to do. (Jarrahi, 2018)

The introduction of AI into various organizational processes has sparked concerns about the potential for intelligent machines to supplant human decision-makers. Jarrahi, on the other hand, views AI not as replacing human cognition but as something that supplements human cognition with mechanisms to enhance human capability in complex decision-making situations (Jarrahi, 2018). In his article from 2021, Vinod Vincent (2021), continues to build on this argument by proposing a decision-making model that combines the strengths of both human intuition and AI while mitigating their respective weaknesses. The approach proposes two sequential methods: the confirmatory method and the exploratory method. The confirmatory method involves the decision-maker making an initial intuitive judgment, which is then validated by AI analysis. If the AI confirms the intuitive decision, it is implemented; if not, further evaluation is necessary. The exploratory method, on the other hand, starts with AI generating a set of decision alternatives, which are then assessed by the human decision-maker using their intuition. Vincent means that this model is particularly useful in ill-structured decision environments where analytical methods alone may be insufficient. For example, in scenarios where quick decisions are required, such as in emergency situations, the intuitive judgment of experts, validated by AI, can lead to better outcomes (Vincent, 2021).

The potential for humans and AI working together in decision-making processes could be substantial as iterated by Vincent (2021) and Jarrahi (2018). A study from 2016 on deep learning for identifying metastatic breast cancer exemplifies this quite well (Wang et al., 2016). The study

showed that when using AI for cancer detection, the AI had a 7.5% error rate, and pathologists had a 3.5% error rate, but when both worked together, the error rate dropped significantly to 0.5%. A more recent study by Schemmer et al. (2023) provides a quantitative example of the benefits of human-AI collaboration in decision-making. In an experiment with 100 participants, the study found that when participants appropriately relied on AI advice, their decision-making performance improved by up to 20% compared to their initial performance without AI assistance.

Overall, the integration of human intuition and AI in decision-making processes holds significant promise for improving outcomes across various domains. By leveraging the complementary strengths of both humans and AI, organizations could potentially achieve more accurate, efficient, and innovative solutions.

2.4 Summary of theoretical framework

Since AI technology is constantly evolving, it is crucial to define AI clearly for this research. Following Lorica and Loukides (2016), we adopt a broad definition of AI as a technology that performs tasks that typically require human intelligence, encompassing technologies such as machine learning and natural language processing. This definition sets the foundation for understanding AI's role across different decision-making models.

The study is anchored in three key decision-making theories: the rational decision-making model, bounded rationality, and the intuitive decision-making model. The rational decision-making model outlines an ideal systematic process for decision-making while assuming complete information and a lack of biases (Robbins & Judge, 2016). Although perfect rationality is often unattainable, this model is a useful benchmark for assessing AI's impact on various decision-making steps, including problem definition, criteria identification, and alternative evaluation.

In contrast, the theory of bounded rationality acknowledges the cognitive constraints that prevent humans from making perfectly rational decisions (Brunsson, 2002). This theory helps explain the deviations from the rational model observed in the interviews, where decision-makers faced limitations in processing information. It also highlights the potential for AI to augment human decision-making by providing extensive data analysis capabilities and thus overcoming some cognitive limitations.

The intuitive decision-making model adds another layer by focusing on decisions based on experience and intuition rather than exhaustive analysis (Kahneman, 2011). This model is crucial for understanding scenarios where decisions are influenced by gut feelings, an area where AI's role is unclear. In other words, where the decision-making process is far from a clear, systematic, rational decision-making process. It helps give a background to assessing how AI tools are more or less useful in decision-making processes where intuition plays a significant role, something that the other modes do not include.

Additionally, the concept of human-AI symbiosis is integrated into the framework, emphasizing how AI and humans can complement each other (Jarrahi, 2018). This symbiosis provides a comprehensive lens through which to view the interaction between AI tools and human judgment. It supports a detailed exploration of AI's potential to enhance decision-making processes, whether by providing additional data, offering new insights, or supporting human intuition.

Together, these models form a comprehensive framework for analyzing how AI influences decision-making. This while accounting for both the systematic and intuitive aspects of human judgment. This theoretical approach will be applied to the empirical data to assess the practical impacts of AI in decision-making processes within Swedish companies, examining both the strengths and limitations of AI integration.

3. Methodology

To adequately address the research questions and achieve the objectives of this study, several critical needs was recognized to be included within the methodological framework:

1. Gathering in-depth insights from participants to explore subjective experiences and nuanced perspectives of decision-makers.
2. A robust theoretical framework to analyze the impact of AI integration on decision-making processes, ensuring that theoretical concepts are effectively operationalized into practical indicators.
3. A systematic and rigorous data analysis process to maintain the reliability and validity of the findings.
4. Attention to ethical considerations to protect the participants' confidentiality and integrity.

The following sections explain the choices of methods and how they fulfill the needs of the study.

3.1 Research Design

For this study a qualitative research methodology has been employed due to its ability to provide rich, in-depth insights into complex questions, such as the adoption of AI within organizational contexts (Bryman & Bell, 2017). A qualitative approach centered around semi-structured interviews allows for a more detailed exploration of experiences, perspectives, and perceptions and is able to provide a more holistic understanding than a quantitative approach would, which typically lends itself better to statistics based research (Bryman & Bell, 2017). Additionally, the exploratory nature of the study further highlights the need for a research approach capable of providing detailed insights. The gathered empirical data acts as the starting point for our analysis which is described by Bryman & Bell (2017) as an inductive reasoning. With a study aimed at exploring a particular subject, the gathered empirical data needs to be interpreted with transparency and open-mindedness which an inductive reasoning approach enables.

To adapt to contemporary research conditions, this study employed digital interviews as the primary method of data collection. Conducting interviews digitally, specifically through Zoom, offers several advantages essential for qualitative research. According to Keen et al. (2022), digital interviews facilitate access to a broader range of participants, overcoming geographical and logistical barriers that might limit participant diversity. Being able to see the interviewee supports the maintenance of rapport and engagement, crucial for eliciting in-depth and honest responses. In conducting the interviews, researchers utilize a semi-structured guide, granting them the freedom to modify the wording or sequencing of questions and introduce new queries based on the participants' responses. This approach enhances depth and understanding but can affect the study's external reliability by introducing variability in the follow-up questions posed in different iterations of the research. According to Chauncey E. Wilson (2014), while this flexibility in semi-structured interviews allows for a richer exploration of complex issues, it also challenges the consistency and reliability of data across different studies, as the spontaneous nature of questioning can lead to variations in the information gathered.

3.2 Data Collection

3.2.1 Selection of Theory

In order to find relevant theories to act as a framework for our study a number of digital databases have been searched for digital books and scientific papers using keywords. The keywords that were used included:

- Decision-making
- Artificial Intelligence
- Human AI (or Artificial Intelligence) Interaction
- Decision-making models

The databases that were searched were mainly provided through Uppsala University and included Business Source Complete and Uppsala University library. Additionally Uppsala University library was utilized for physical copies of some books as well. In order to ensure the

legitimacy of the study a critical approach was applied in the process of theory selection with the main goal to find peer-reviewed and often cited books and scientific articles.

3.2.2 Selection of respondents

For the selection of the respondents, the choice was made to mainly search for executives and decision-makers that have good insight into their organization, both on a strategic level as well as the daily operations. The respondents were chosen from diverse backgrounds and sectors ranging from technology to manufacturing, reflecting different degrees of AI adoption and data orientation. The aim of this diversity was to gain a broad understanding of AIs role in different parts of the decision-making process across different sectors, organizational cultures and operational frameworks. The sample size was determined based on the capacity to conduct thorough individual interviews within the time constraints of the study while ensuring diverse and relevant insight. In total, six interviews were conducted. As shown in Table 1 the respondents consisted of:

- Two CEO's from different industries from small and mid sized companies.
- Two CCO's in different mid-sized companies within the renewable energy sector.
- A partner from an enterprise size management consulting firm with a technical background.
- A project buyer within a large company within the motor vehicle manufacturing sector.

Respondent	Title	Sector	Years of Experience	Date	Duration
1	CEO	Retail and sales	20	2024-05-02	56 min
2	Partner	Management consulting	12	2024-05-07	22 min
3	Project Buyer	Motor Vehicle Manufacturing	2	2024-05-16	26 min
4	CEO	Software as a service (SaaS)	18	2024-05-06	25 min

| 5 | CCO | Renewable energy | 14 | 2024-05-16 | 19 min |
| 6 | CCO & Entrepreneur | Sales | 15 | 2024-05-16 | 21 min |

Table 1 - List of respondents

While the chosen method contributed to a diverse set of sectors, it is acknowledged that conducting interviews with mostly top executives is a relatively homogeneous group in terms of rank and could lead to some overlap in perspectives, shared biases and shared blind spots. This limitation is discussed in the context of the study's findings, but the pros of finding individuals with insight to their whole organization were decided to outweigh the cons.

3.2.3 Interviews

The main data collecting method that was utilized were semi-structured interviews since, according to Bryman & Bell (2017), this method lends itself well to gaining understanding of the social environment of individuals. The interviews were conducted using a predetermined framework of questions in order to maintain proper consistency between interviews. Due to the interviewees preferences as well as geographical and time based constraints, all interviews were held digitally using Zoom or Microsoft Teams.

3.2.4 Operationalization

Operationalization in this thesis aims to combine the theoretical frameworks of decision-making models and the real-world application of AI within Swedish companies. This study ensures a robust methodological and empirical approach by taking theoretical concepts and making them into clear indicators.

The study's theoretical framework has been deconstructed into specific parts. Each part relates directly to a component of the rational decision-making model and includes the bounded rationality theory because of the relation between the two theories. The parts also include the theory of AI-human-symbiosis by Jarrahi (2018) as the parts are designed to find out where AI is

useful in a decision-making process today, therefore understanding the level of cooperation that exists today between AI and humans when making decisions.

In order to comprehend these parts, a set of specific questions has been formulated. To maintain neutrality and reduce researcher bias, the questions were structured for open-ended responses and can be seen in table 2.

Question	Aim of the question
1. Which AI tools have you implemented in your work and why?	The question aims to understand what types of AI tools the organization has adopted in order to give context to the other questions.
2. In which areas do you use AI?	This question is designed to explore the breadth of AI application within the organization and helps identify which operational or strategic areas are most influenced by AI, indicating where the organization sees the greatest potential for AI to add value.
3. Has the use of AI changed how your organization detects and defines problems?	This question helps to analyze how and if the first step "Define the problem" in the rational decision-making process has been impacted by AI.
4. Has AI changed how you develop criteria in a decision-making process and if so, how?	This question delves into the impact on the second step of the rational decision-making process: "Identify the decision criteria".
5. Has AI influenced how you weigh the different criteria in a decision-making process?	This question delves into the impact on the third step of the rational decision-making process: "Allocate weights to the criteria".
6. How has AI helped to generate decision alternatives? **6a.** Are there examples where AI has highlighted options that would not otherwise have been considered?	This question delves into the impact on the fourth step of the rational decision-making process: "Develop alternatives". The question seeks concrete examples to understand AI's value in uncovering less obvious and more innovative solutions.

7. Does AI help you make more optimal decisions among alternatives in a decision-making process?	This question delves into the impact on the fifth and sixth step of the rational decision-making process: "Evaluate alternatives" and "Select the best alternative".
8. How do you see AI developing in the context of your decision-making in the future?	This forward-looking question aims to gather insights on anticipated trends and future applications of AI. It can reveal ongoing plans for further integration and also expectations about how AI will continue to evolve as a decision-support tool.

Table 2 - List of interview questions

3.3 Analysis

This study's analysis method is designed to systematically evaluate the qualitative data gathered from semi-structured interviews. This section describes the steps taken to ensure the validity and reliability of the findings. To ensure accurate content capture, all recorded interviews were transcribed. Then the participants were sent the transcribed document to verify the content to strengthen the reliability of the study, as Bryman & Bell (2017) describes.

After transcribing each document, we reviewed them to identify important statements related to the research questions and the theoretical content of the study. This was to pick out the quotes that best represented the respondent's opinions and experiences regarding the use of AI in decision-making processes. Additionally, we created a summary of each interview that highlights the main conclusions and takeaways, making it easier to identify recurring themes and patterns related to the theory and questions across the data set.

The primary method of data analysis used in this study is thematic analysis. This method is commonly used in qualitative research to identify, analyze and report patterns within data. Thematic analysis is flexible and provides a detailed account of data, which is helpful for exploring complex issues like AI integration in decision-making (Braun & Clarke, 2006). The process of thematic analysis involves the following steps:

1. **Familiarization with Data:** One should immerse oneself in the data by reading the transcripts multiple times. It is also helpful to note down initial ideas during the reading process.

2. **Generating Initial Codes:** Systematically coding the entire data set, collating data relevant to each code.

3. **Searching for Themes:** The first step is to group codes into potential themes and gather all relevant data for each theme.

4. **Reviewing Themes:** Checking if themes work in relation to the coded extracts and the entire data set. Generating a thematic map is useful to gain an oversight.

5. **Defining and Naming Themes:** Ongoing analysis to refine each theme and generate clear names.

6. **Producing the Report:** This is the final chance to refine the analysis, present it, relate it back to the research question and literature, and provide vivid and compelling data examples.

Thematic analysis is an appropriate method for this study because of its theoretical flexibility. This approach enables the identification of themes closely related to the data through an inductive process (Braun & Clarke, 2006). This thematic analysis utilizes the theories presented in this paper to guide the selection of relevant themes, both in relation to the interviews and the theoretical framework of the study.

3.3.1 Thematic table

The developed codes, categories and themes that were developed can be seen in table 3.

Themes	Categories	Codes
AI as an information and knowledge amplifier	● Analysis ● Communication ● Information	● Product development ● Risk analysis ● Finding solutions ● Knowledge ● Market Research ● Strategy

		● Problem Detection
Trusting AI	● Accountability ● Competence ● Sensitive information	● Weighting criteria ● AI acceptance ● Data security ● Trust ● Habit ● Experience ● Decision criteria ● Soft values
AI as a productivity tool	● Automatization ● Daily tasks ● Time saving	● Optimize ● Generating ideas ● Productivity ● Generating text ● Programming
The future of AI in decision-making processes	● Digitization ● Security	● Limitations of AI ● Future ● AI integration

Table 3 - Thematic table

3.4 Limitations and quality of research

This study utilizes a qualitative methodology to delve into specific, context-driven insights. Although this approach offers in-depth perspectives, it may also present several limitations alongside its strengths. Since these generally are the main decision makers in most organizations, the sample selection primarily includes top executives. However, this may also introduce a selection bias, potentially limiting the applicability of the findings across other organizational levels. According to Bryman and Bell (2017), such a bias can significantly affect the validity and generalizability of the research, as they highlight the need for more diverse samples in maintaining research validity.

Furthermore, the inherent nature of qualitative research can potentially limit the ability to generalize findings to all organizations utilizing AI. Qualitative research is often subject to subjectivity and challenges in result replication, as discussed by Keen et al. (2022), who point

out the difficulties in achieving consistency and reliability in qualitative studies (Keen et al., 2022). Additionally, a significant limitation with this study may be the rapid pace of AI technology development. This rapid pace of development could quickly render the study's conclusions obsolete as new advancements emerge. Jarrahi (2018) addresses this dynamic and rapidly evolving field, noting the challenges it poses for maintaining the relevance of research findings over time (Jarrahi, 2018).

3.5 Ethical considerations

Ethical considerations are paramount in any research involving human participants. This section outlines the ethical frameworks and considerations applied throughout the selection and interviewing process in the study. This was done with the help of advice from Vetenskapsrådet (2002). A critical ethical aspect was ensuring that the interview participants were informed and aware of the purpose of the study. This was ensured when the potential participants received their offer to take part in the study and right before the interviews again. The consent from the participants was given in advance and asked for in the introduction before the interviews. Here, the participants were asked if citations from them could be used and if the interview could be recorded. The participants were also informed that they did not have to answer the questions they did not want to. The participants were also informed that citations from them would be sent to the participants for approval before using them (Vetenskapsrådet, 2002).

The confidentiality of the participants was considered by asking them if they wanted to stay anonymous and by ensuring that all files related to the interviews were not shared with anyone.

4. Result

4.1 AI as an information and knowledge amplifier

The empirical findings revealed a pattern showing that organizations currently use AI in managing and leveraging information and knowledge more efficiently. All respondents mentioned that they use different types of AI for brainstorming purposes in order to find new

ideas or solutions. Respondent 2 described an example of this: *"If I am to meet with a CEO of a bank, I can input 'what are the five key trends in SMI banking currently?' and it provides synthesized insights from a blend of internal and external sources"*. Respondent 6 further elaborated on this where they mentioned how they use AI for problem identification as well as solution development: *"…so that we then can ask Chat GPT to get a definition on 'What is this actually?' and then ask in the second step: 'Which possible solutions are there?'."* Additionally both respondents 4 and 5 expressed similar ways of utilizing AI, mentioning that it is an excellent tool to gain new perspectives on a problem.

Furthermore it became apparent that most of the respondents found AI to be helpful in areas of analysis and knowledge gathering. Respondent 5 shared his reliance on AI in areas of market analysis and enhancing market intelligence: *"Personally, I use it a lot in research. For example: 'What information is there about this company?'"*. Respondent 4 further echoed this sentiment by providing an example of how they utilize AI in cases of risk analysis: *"If we have received a contract proposal from a customer, and we have our own proposal. Then we can make use of AI to compare them and let it analyze the differences and potential risks. So that makes it a type of analysis mechanism."* Though almost all respondents shared this view, it is worth noting that one of the respondents had experienced shortcomings with AI in this regard. Respondent 3 mentioned getting varied results when it came to leveraging AI for market research and analysis and therefore did not use it as much.

Overall, the empirical findings seem to underscore the role of AI as a powerful information and knowledge amplifier within organizational decision-making processes. As described by the respondents, AI is leveraged for brainstorming, problem identification, solution development, market analysis, and risk assessment, where they highlight AI's capacity to synthesize vast amounts of data into actionable insights. This indicates that AI has had noticeable value to organizations as a tool to amplify information gathering and analytical capabilities in decision-making processes. Respondent 4 reflected on how this has impacted their decision-making processes in general: *"I would say that if you consider a decision-making process to be first diverging and then converging, we use AI more in the diverging phase to*

explore different perspectives rather than just as a decision selecting tool. It's more about asking, "Have we missed anything?" rather than using it to make the decision.''

4.2 Trusting AI

The willingness to trust AI in several aspects emerged as a central theme in the empirical findings. One of these main aspects was accountability, meaning that humans are still responsible for the final decision, even if an AI has assisted them throughout the process. Respondent 1 articulated this clearly: *"Being the one ultimately responsible, with considerable experience, I trust my own judgment more. This might not always be positive, but it explains why one might not fully rely on AI. I also believe it's important that I can stand by my decisions"*. He further explained: *If something goes wrong, I don't want to blame AI. As a leader with ultimate responsibility, that's not something desirable"*. Similarly, respondent 2 emphasized the importance of personal accountability in decision-making, reflecting on the comfort of relying on one's experience. Having been in the business for a while, respondent 2 explained a confidence in their own decisions, which they explain to be a potential reason to why they might not fully rely on AI.

Another pattern that presented itself in the empirical findings was the significant concern regarding data security. Five out of the six respondents in some way mentioned the need for cautiousness in how and what is communicated with AI. The main issue is not yet being able to trust current AI tools with sensitive information without risking information or security breaches. Respondent 2 and 5 both expressed strong reservations about uploading sensitive data to AI platforms like ChatGPT. Respondent 2 stated, *"We would never dare to upload sensitive text and information about a specific client to ChatGPT, we would never do that"*. Respondent 5 echoed this concern: *"Currently, I wouldn't be super keen to send financial figures to ChatGPT for analysis"*.

Though almost all respondents echoed this sentiment, respondent 3 mentioned how their company has managed to build their own isolated digital sandbox environment specifically for

handling confidential material in combination with AI. This allows employees to use AI while ensuring that sensitive and confidential data remains safe: *"The company created a sandbox exclusively for the company and its employees to share confidential material securely and get suggestions and feedback on confidential matters"*.

In identifying trusting AI as a central theme in what affects decision-making processes, AI acceptance stood out as a common topic among some of the respondents. The degree to which individuals are comfortable and willing to integrate AI into their processes seems to be a factor in how much it is allowed to influence decision-making. Respondent 2 highlighted the differences in AI acceptance based on experience and familiarity: *"The extent to which this solution is used varies greatly between someone who has been here for 12-13 years like myself and someone who has been here for just two years. Our more junior colleagues use it all the time while I rarely use it."*. The respondent indicated that younger, less experienced employees might be more open to the adoption of AI assistance in decision making processes, while more seasoned professionals, with more experience, might tend to rely more on their previous experience. Both respondent 3 and 4 observed this variability as well where respondent 3 pointed to AI as a tool with a lot of potential but one that will require a shift in mindset in order to fully embrace its potential. Respondent 4 further elaborated on this phenomena within his organization: *"There is still a wide spectrum of how much different individuals use these tools in their processes, and I believe that there is a step to be taken, where some will really embrace it and others will need more help to see what this tool can do for them"*.

The empirical findings also revealed a consistent concern among respondents regarding AI's ability to fully consider soft values in decision-making processes. All respondents noted that these soft values, which include factors such as employee well-being, organizational culture, and interpersonal dynamics, are crucial to holistic decision-making but are often challenging for AI to assess accurately. Respondent 1 articulated this concern clearly, explaining that AI can offer valuable data and insights but struggles to understand and evaluate the human elements critical to decision-making. Respondent 2 also highlighted this issue, particularly in relation to employee

interactions and morale. They pointed out that while AI tools excel at analyzing hard data, they fall short in understanding the softer aspects like employee satisfaction and team cohesion, which are vital to organizational health and cannot be overlooked. Respondent 4 echoed these concerns by emphasizing the importance of human judgment in balancing quantitative data with qualitative insights: *"Given the tools we use, they do not have enough context to provide a good basis for decision-making, however, I feel great value that it can provide other perspectives and angles."*

To summarize, the empirical findings indicate that while there is a cautious willingness to trust AI in various aspects of decision-making, significant concerns remain regarding accountability, data security, AI acceptance, and the consideration of soft values. The respondents pointed to the fact that while AI can serve as a valuable tool for enhancing information and knowledge management, human oversight and judgment remain important. Participants highlighted the fact that there is an important balance to be struck between leveraging AI capabilities and maintaining human control and ethical considerations in their decision-making processes.

4.3 AI as a productivity tool

From the interviews it became clear that AI currently is most widely perceived as a tool to increase productivity within these organizations. When asked in which areas the respondents and their organizations use AI, apart from the earlier mentioned use cases, almost all respondents mentioned daily tasks as one of the biggest areas of use. These tasks included mainly e-mailing, summarizing document contents and text and code generation for things such as documents, marketing and programming. These findings are notable since increased productivity in decision-making processes could potentially accelerate and help streamline them. In particular respondent 2 highlighted the dual benefits of AI: improving operational efficiency and freeing up employee time for more value-creating activities: *"It has really been about increasing the efficiency and productivity of what we do, as well as opening up for our consultants to be able to spend time on things that are more value-creating."*.

Most respondents highlighted AI's ability to efficiently process and analyze large amounts of data, enhancing their productivity. Respondent 5 elaborated on how Chat GPT allows them to more quickly process large amounts of information from a subject: *"I think it's a fantastic tool, If one should read about a subject or start of developing ideas, bounce those ideas and then sort of take it from there, I think it's as good as it gets."*. Furthermore, a few respondents mentioned AI to be particularly beneficial in increasing productivity in programming tasks. Respondent 6 illustrated how AI has significantly increased productivity by enabling rapid generation and testing of different code variations: *"You can use it to quickly different types of variants of code, which you can then test and eliminate the ones that don't work, rather than having to create each one manually and test them against each other. So in this respect, there's definitely a huge value in it."*

4.4 Quality of decision outcome

Interestingly, on the question of whether increased AI involvement in decision-making processes have led to increased quality in decision outcome the respondents were quite divided and leaned more negatively. While only one of the respondents expressed that the quality of decision outcomes had improved, three respondents said that they couldn't see any such improvements at all. Furthermore many of the respondents also noted that they had no way of measuring this and thus answers to this question generally became subjective.

Respondent 4 expressed a positive sentiment towards AI's influence, noting that while there is no concrete evidence, the general feeling is that decisions have become more thoughtful. When asked about if the quality of decisions within his organization had improved they answered: *"The general feeling is that it has led to better decisions, although I can't say I have any proof of it. But the feeling is that decisions become more thought through and that's what I find exciting."*

In contrast, respondents 5, 3 and 2 were the ones that presented a more skeptical view. Respondent 5 remarked: *"No, I can't say that AI has improved the quality of our decisions. But I guess that in general that's a question of maturity for the company."*. Respondents 1 and 6 did not give a definitive answer to this question. It is notable that though the respondents could not

observe any improvement of decision quality, all of them expressed that it would probably only be a matter of time before it does.

4.5 The future of AI in decision-making processes

Notably, most respondents had a very similar outlook on the future of AI in their decision-making processes. Though these findings do not necessarily assist in answering the research question of this study, as it looks to the past rather than the future, all of the respondents indicated that they are in a state of cautious anticipation. This refers to the fact that they aren't utilizing AI in their processes to its fullest extent because of the anticipation that it is soon going to be better and more tailored to their needs.

Respondent 5 shared a vision of increased AI integration in daily operations: *"I believe that in the near future, AI will be seamlessly integrated into our workflows, assisting us in everything from routine tasks to strategic planning. The key will be developing trust in these systems and ensuring they are used ethically and effectively."* The respondent suggested that while there is optimism about AI's future role, there is also an implicit recognition that AI needs to reach a certain level of maturity before it can be fully integrated into decision-making processes: The respondent noted that their models are currently not sufficiently trained on their specific context to provide significant value. However, they believe it is clear that progress will be made in this direction and that the value of AI will increase rapidly as it becomes more integrated into these types of processes

5. Discussion

5.1 Impact of AI on Decision-Making Processes

The empirical findings of this study indicate that the integration of AI has notably impacted some aspects of the decision-making processes in Swedish companies, while other areas still remain unchanged. By analyzing the observations through the lens of the rational decision

making model (Robbins & Judge, 2016) we are able to conclude that the stages where AI's ability to process large amounts of data and provide innovative solutions are the ones where we see the biggest impact. These primarily include the stages of problem definition and problem detection, as well as the generation of decision alternatives. In contrast, the development and evaluation of decision criteria, along with the final selection of alternatives, have seen less impact due to the reliance on human judgment for evaluating soft values and making intuitive decisions.

The first significant impact of AI on decision-making processes is in the area of problem definition and detection. These are the initial steps of the rational decision making model as presented by Robbins & Judge (2016). According to a majority of the respondents, AI tools are frequently used to identify things as potential issues, risks or emerging trends that in turn initiates a decision making-process. The theory of bounded rationality suggests that decision-making is limited by the information available, the cognitive limitations of decision-makers, and the finite time they have to make a decision (Brunsson, 2002). These are all weaknesses that artificial intelligence can help alleviate. AI in its current stage of evolution are able to handle complex calculations and perform data analyses that are unfeasible for human decision-makers due to cognitive and temporal limitations. This becomes evident from the respondents' use of AI for risk analysis and market intelligence, where AI's analytical capabilities allow for quicker and more comprehensive assessments than would otherwise be possible.

The second significant observation is that AI seems to influence the development of alternatives in decision-making processes. Traditionally, this step involves brainstorming and creative thinking which can be limited by the decision-maker's knowledge, experience or cognitive ability. According to Robbins and Judge (2016), these types of limitations mean that people can not consider every possible option leading to decisions that "satisfice" rather than seeking an optimal solution. AI, particularly generative AI tools, enhances this step by first assisting in brainstorming for new ideas, perspectives and solutions and from there suggest a wider range of potential solutions based on the insights. For instance, one respondent indicated that AI has been

particularly useful in uncovering innovative alternatives that might not have been considered through traditional brainstorming methods. This pattern emerged consistently among respondents, who highlighted that AI-generated alternatives often included unexpected and creative solutions that broadened their strategic options.

However, the stages of development and evaluation of decision criteria appear to be less impacted by AI. Based on the empirical findings this phenomenon can be attributed to the inherent limitations of AI in evaluating soft values such as employee well-being, organizational culture, and interpersonal dynamics that, according to all respondents, are critical in many business decisions. Respondents often relied on their own experience and intuition to weigh these soft values, which are difficult for AI to quantify and analyze effectively. This reliance on intuition aligns with the theory of intuitive decision-making, which emphasizes the role of experience, instincts, and subconscious processing in making decisions (Kahneman, 2011). According to the respondents this human intuition seems to be particularly crucial when dealing with complex social and organizational dynamics, reinforcing the necessity of human judgment in these stages.

Similarly, the evaluation and selection of alternatives in decision-making processes have not been significantly impacted by AI. Respondents tended to rely more on their own judgment when selecting the best alternative, which also aligns with theories of intuitive decision-making (Robbins & Judge, 2016). The findings reveal that respondents trust their judgment over AI when it comes to final decision-making. This is largely due to the accountability and comfort associated with human decision-making. This cautious approach to AI reflects the importance of personal accountability and the need to stand by their decisions showing that decision makers are not ready to solely rely on AI to make decisions. Respondents emphasized that while AI can provide valuable data-driven insights, the final decision-making often involves factors that require human intuition and contextual understanding.

In summary, while AI has noticeably impacted the problem definition and alternative generation stages of decision-making processes in Swedish companies, the development and evaluation of decision criteria, as well as the final selection of alternatives, remain heavily reliant on human judgment. These stages are less impacted by AI due to its limitations in evaluating soft values and the importance of personal accountability. However, the complementary relationship between humans and artificial intelligence allows organizations to leverage AI's strengths in data processing and pattern recognition while relying on human intuition and contextual understanding for final decisions. Aligning with Jarrahi's ideas of a symbiotic relationship between human and AI (Jarrahi, 2018), this looks to be the first steps towards a transformation in Swedish organizational decision-making frameworks, where AI's analytical power complements human cognitive capabilities.

5.2 Enhancement of Decision-Making Efficiency

Another pivotal finding from this study is the significant role of AI in enhancing decision-making efficiency within Swedish organizations. This enhancement is primarily observed through increased productivity, acceleration of data processing, and the capability to handle complex data sets efficiently. These capabilities allow decision-makers to arrive at much more informed decisions more swiftly.

All respondents unanimously mentioned the main areas where they use AI to do routine tasks such as emailing, summarizing documents, and generating text and code. These applications have notably increased operational efficiency by reducing the time and effort required for these activities. Respondents highlighted the ability of AI tools like ChatGPT to quickly process large amounts of information, providing summaries and insights that streamline decision-making processes. Furthermore, respondents emphasized that AI-driven productivity gains allow employees to focus on more value-creating activities. By automating routine and time-consuming tasks, AI frees up time for strategic planning, critical thinking, and problem-solving. This shift not only enhances individual productivity but also contributes to the overall strategic agility of the organization. As outlined by Jarrahi (2018) this symbiosis between

humans and artificial intelligence shows that there is a lot of value to extract from integrating AI in parts of decision-making processes.

On the surface this shift in how employees within organizations handle daily tasks may seem like a small one but it shows to be one that has a big impact on the decision-making processes. The increase in productivity inevitably leads to faster and more streamlined decision-making processes, allowing a decision to move faster from the first stages of the rational decision making model to the last one. An outstanding example of this came from respondent 6 regarding the way they generate possible solutions when it comes to coding. In that case they were able to let an AI generate and test various types of code to determine the best possible solutions in a manner that would have been unfeasible for a human.

5.3 The future of AI in decision-making processes

The study's exploration of AI's role in decision-making processes within Swedish companies provides valuable insights into its current applications and hints at AI's evolving role in the future. Participants expressed a state of cautious anticipation regarding further integration of AI in their decision-making processes. This suggests that they recognize AI's potential in the area of decision-making but also understand its current limitations.

The respondent's outlook on the future of AI in decision-making reflects a consensus that AI will become more deeply integrated into both strategic and operational processes as the technology matures. Many participants indicated that they are not yet utilizing AI to its fullest potential. This is largely due to AIs' described limitations in handling complex, multifaceted decisions that require a deep understanding of human nuances and organizational contexts. However, there is an optimistic belief that AI will soon be more tailored to their specific needs, enhancing its effectiveness and reliability in decision-making roles.

Many of the respondents informed us that their companies were working in preparation for more AI integration which reflects a desire for more customized AI solutions specifically tailored to specific organizational needs and challenges. Customization could involve AI systems that are

trained on company-specific data or those that integrate more deeply with existing business systems, providing more contextualized and relevant insights.

As we look to the future, the idea of human-AI symbiosis as described by Jarrahi (2018) is likely to become more prominent. According to respondents, AI's role is expected to shift from being a tool that mainly enhances productivity to becoming an integrated part of the decision-making process, it's only a matter of time. In this new role, AI will complement human intuition and experience with data-driven insights. This collaboration has the potential to bring together the strengths of human decision-makers and AI technologies, leading to more innovative, responsive, and effective decision-making processes.

6. Conclusion

This study aimed to enhance our understanding of the integration and impact of artificial intelligence on decision-making processes of Swedish companies. Through qualitative research involving semi-structured interviews with executives and decision-makers across various industries, several key insights regarding AI's current and future roles in organizational decision-making were uncovered. AI enhances an organization's ability to process vast amounts of information quickly which proves to be particularly valuable in the initial stages of decision-making, such as problem identification and solution generation. AI is mainly perceived as a productivity tool that automates routine tasks such as emailing, summarizing documents, and generating text or code. This automation allows employees to become more efficient and focus on more value-creating activities, thereby streamlining and speeding up their decision-making processes.

Despite its advantages, AI's role in the final stages of decision-making, where human intuition and judgment are critical, remains limited. Executives are cautious about fully relying on AI, especially when making final decisions that involve soft values. Concerns about data security and the need for personal accountability also contribute to this cautious approach. The study found that while AI can provide valuable data-driven insights, the final decision-making often

involves factors that require human intuition and contextual understanding. This reliance on human judgment shows the importance of striking a balance between leveraging AI capabilities and ensuring ethical and accountable decision-making processes.

In conclusion, this study provides practical insights into the current roles and limitations of AI in Swedish company's decision-making processes. AI offers significant advantages in information processing and productivity, but its integration must be balanced with human intuition and judgment. As AI technology continues to evolve, organizations should remain vigilant about its ethical implications and strive for an integration that maximizes the strengths of both human and machine intelligence.

6.1 Limitations

The research that has been in this study has a few limitations that warrant consideration. Firstly, the research relies on a relatively small sample size, focusing predominantly on top executives. While these individuals provide valuable insights into strategic decision-making, their perspectives may not fully represent those of employees at various organizational levels. This selection bias limits the generalizability of the findings, potentially skewing the results towards a narrow view of AI's impact within the organization.

Additionally, the qualitative methodology employed in this study, while rich in detail, introduces inherent limitations. The interpretative nature of qualitative analysis can lead to subjectivity, affecting the replicability of the study. The use of semi-structured interviews allows for flexibility and in-depth exploration but may also result in inconsistencies in the data collected across different interviews, thus impacting the reliability of the findings.

Another significant limitation is the rapid pace of technological advancements in AI. The study's findings may quickly become outdated as new AI tools and applications emerge, altering how AI impacts decision-making processes. This constantly evolving nature of AI technology makes continuous research within the area necessary to keep pace with ongoing developments and ensure the relevance of future studies.

6.2 Future research

An important area for future research involves studying the effects of AI on organizational structure and culture. As AI technologies become more integrated, it is crucial to comprehend their impact on organizational dynamics, employee roles, and decision-making hierarchies. This entails examining the varying levels of resistance or acceptance of AI tools among different staff levels and the resulting implications for leadership and training.

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