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Exploration of employee attitudes in AI adoption

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ABSTRACT:
Tämä laadullinen yksittäistapaustutkimus tarkastelee työntekijöiden asenteita liittyen tekoälyn käyttöönottoon organisaatioissa. Tekoälyllä viitataan monimutkaisiin teknologioihin, jotka jäljittelevät ihmisen älykkyyttä, viitaten teknologian kognitiivisiin kyvykkyyksiin. Tekoäly mahdollistaa monia hyötyjä organisaatioille, sen avulla voidaan esimerkiksi optimoida prosesseja, edistää tehokkuutta ja innovaatiota sekä tukea päätöksentekoa. Organisaatioiden haasteeksi on kuitenkin muodostunut onnistunut tekoälynkäyttöönotto ja tavoiteltujen hyötyjen realisoituminen.

Aikaisempi tutkimus tunnistaa työntekijöiden asenteiden merkityksen teknologisissa muutoksissa. Tämän voidaan todeta pätevän myös tekoälyn käyttöönottoon, joka itsessään on uniikki ja kompleksi organisaatiotason muutos. Työntekijöiden asenteita tarkastelemalla organisaatiot voivat saada käsityksen niistä tekijöistä, jotka osaltaan voivat edistää tai hidastaa tekoälyn käyttöönottoa.

Tutkimuksen teoreettinen tausta koostuu muutosjohtamisen tutkimuksesta sekä teknologian ja tekoälyn käyttöönottoa käsittelevistä tutkimuksista, joiden keskiössä ovat asenteet ja ihmiset. Hyödyntämällä muutosjohtamista koskevaa tutkimusta mahdollistettiin yksityiskohtaisempi kuvaus työntekijöiden asenteista sekä niiden mahdollisista kontribuutioista tekoälyn käyttöönoton onnistumiselle. Valintaan vaikutti myös tekoälyä koskevan tutkimuksen vajavaisuus aihepiiristä, ja tällä tutkimuksella pyritään laajentamaan ymmärrystä ja tuottamaan lisää informaatiota aiheesta.

Tutkimuksen keskeiset tulokset kiteyttävät työntekijöiden asenteiden kuvastavan avoimuutta, sitoutuneisuutta, kyynisyyttä sekä skeptisyyttä tekoälyn käyttöönottoa kohtaan. Näitä löydöksiä tukee aikaisempi muutosjohtamisen tutkimus, teknologian käyttöönoton tutkimus sekä tekoälyn käyttöönoton tutkimus. Tutkimuksen löydöksiin perustuen organisaatioiden tulisi keskittyä tukemaan työntekijöiden positiivisia tekoälyn käyttöönottoon liittyviä asenteita, avoimuutta ja sitoutuneisuutta sekä vähentämään negatiivisia asenteita, kyynisyyttä ja skeptisyyttä, tavoitellessaan onnistunutta tekoälyn käyttöönottoa.

KEYWORDS: Artificial intelligence, employee attitudes, organizational change, case study

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1 Introduction

1.1 Research background

The fast pace of change and the transformational nature of it create an environment of uncertainty in organizations, as the change processes are no longer linear nor planned years ahead following a previously planned roadmap from start to finish (Li, 2020, p. 81; Matsunaga, 2022). Rather they are fluid and constantly evolving, demanding constant informing, evaluation and updating of strategy from organizational leaders (Li, 2020, p. 812). Organizations' success in the world that is currently going through another technological transformation depends heavily on its ability to continuously adapt and integrate new technologies, transition to new business models and to new organizational designs (Li, 2020, p. 814-815).

Artificial intelligence (AI) is currently one of the most transformational influences affecting the everyday lives of humans and organizations and its impact continues to grow (Morandini et al., 2023, p. 41; Lee et al., 2022, p. 1; Bankins et al., 2024a, p. 159). AI is commonly described as a machine's ability of human thinking, referring to the cognitive abilities of such systems (Kergroach, 2017, p. 7). It is applicable for numerous purposes of use, such as automation of a particular tasks or parts of tasks, optimization of processes and performance, and augmentation of human intelligence (Makarius et al., 2020; Plastino & Purdy, 2018; Chowdhury et al., 2022, p. 31-32; Glikson & Woolley, 2020). AI benefits organizations in many ways while affecting the organizations' core processes, as it transforms the ways tasks are accomplished and performed, how decisions are made and how interactions are carried out (Deloitte, 2017, p. 20). AI in many organizations is used as the key source of innovation and it can provide many advantages for organizations in competitive fields (Li, 2022, p. 3; Chowdhury et al. 2022, p. 31).

The transformation created by AI and other new technologies is referred to as the Fourth Industrial Revolution or the Second Machine Age (Jarrahi, 2018, p. 578; Im & Kim, 2022, p. 559). Organizations in varying fields are adopting these new technologies fast, and the

transformational influence that AI is expected to have on businesses and in the future of work is significant (Lee et al., 2022, p. 1; Deloitte, 2017, p. 20). However, organizations are struggling to gain any actual benefits and carrying out successful AI adoption processes (Deloitte, 2017).

1.2 Research gap

The transformational power of AI exceeds beyond the organizations processes to its employees, and despite the form or application of the technology, AI is set to change the nature and meaning of work, alongside employee roles, tasks, and skills (Chowdhury et al., 2022; Chowdhury et al., 2023; Bankins et al., 2024b; Presbitero & Teng-Calleja, 2023). However, AI has been widely studied and explored from a technical standpoint as many studies focus on the development of technical resources and systems (Makarius et al., 2020). The research of AI in the field of human resources management has not gained as much interest, even though prior industrial revolutions and technical advancements have proved the importance of developing human capital in the process (Jaiswal et al., 2022, p. 1184; Makarius et al., 2020). Employees need to adapt to the transformation brought by AI by developing their knowledge, skills and abilities to be able to leverage such systems and successfully integrate them into their work (Malik et al., 2022; Presbitero & Teng-Calleja, 2023; Jaiswal et al., 2022; Glikson & Woolley, 2020; Makarius et al. 2020; Haenlein & Kaplan, 2019b, p. 23). Through successful employee adaptation organizations can gain the benefits of AI adoption (Chowdhury et al., 2023; Kergroach, 2017, p. 7).

This research is grounded in the assumption that employee attitudes act as mediators or variables in AI adoption processes, impacting the success of such processes (Presbitero & Teng-Calleja, 2023; Malik et al., 2022; Bankins et al., 2024a). Few studies, such as the research conducted by Cao et al. (2021), Park et al. (2024) and Lichtenthaler (2019) examine this relationship between employee attitudes and AI adoption. As the previous AI research concerning attitudes has recognized employee attitudes contribution to the

success of AI adoption, it has usually focused on making rigid distinctions between negative and positive attitudes (Lichtentaler, 2019; Baabdullah et al., 2021; Cao et al., 2021). To expand the understanding of attitudes and their formation, this research aims to further the inspection of attitudes, going deeper in the exploration into their characteristics and underlying meanings. This is done to fill the gap in AI research in the field of human resources management that currently exists by providing more information about the attitudinal concepts and how they are formed with regard to AI adoption in organizations.

Together with AI specific literature, technology acceptance and change management theories concerning employee attitudes are utilized as the theoretical premises in this research. This is done as the introduction of AI into organizations is fundamentally a change process including the introduction of a new technology (Chatterjee et al., 2021; Bankins et al., 2024a). Leveraging change management research to AI adoption provides insights into the formation and characteristics of employee attitudes as well as their effect on change success in the organizational change context (Choi, 2011). Another reason for utilizing the different research disciplines concerns the small amount of AI research regarding AI attitudes in relation to the organizations efforts to adopt AI in their processes and actions. Based on the previous research regarding AI adoption, technology acceptance and change management, it's argued that managing employee attitudes is vital when organizations are pursuing successful adoption of AI technologies (Presbitero & Teng-Calleja, 2023; Malik et al., 2022; Bankins et al., 2024a).

1.3 Research problem and questions

As described above, a prominent need for more research of AI in the organizational context and regarding the employees' perspective exists (Im & Kim, 2022, p. 559; Chowdhury et al., 2022, p. 32; Suseno et al., 2022). The purpose of this study is to explore the employee perspective of AI adoption and expand the understanding of employee attitudes towards AI adoption. The following research questions are proposed to guide and support the research purpose:

1. What attitudes do employees experience and express towards AI adoption in their organization?
2. How are these attitudes formed and what characteristics and meanings do they portray?
3. What is the contribution of these attitudes to the success of AI adoption in organizations?

1.4 Research object

The impact of AI on employees depends on multiple individual and contextual factors, indicating that differences in the adoption and implementation processes are likely to occur between employees and organizations (Bankins et al., 2024a, p. 169; Meijer et al., 2021; Tong et al., 2021). Prior research has also pointed out that the introduction of such complex and cognitive technologies should be approached from a process standpoint including the context that it is happening in, rather than viewing it as a singular or one-off implementation of an instrument (Meijer et al., 2021). To address the subjective and context specific nature of AI adoption, a case study was conducted utilizing qualitative methods (Yin, 2009; Piekkari & Welch, 2020).

The case subject was a single organization and its frontline service employees operating in the retail industry in Finland. The exploration of such an organization operating in the retail industry is prominent, as the impact and possible business value of AI is expected to be significant due to its cognitive capabilities and various possible applications (Bonetti et al., 2022; Heins, 2023). Retail organizations adopt AI to enhance their value creation processes and customer experience, to gain cost reductions and performance advances among many other objectives (Bonetti et al., 2022). To gather the research data, 14 employees of the case organization participated in the research interviews. A data-driven analysis utilizing qualitative methods was conducted and findings were further contrasted with theory in the discussion of this research. Main findings of the study

included the identification of four attitudinal concepts, openness, commitment, cynicism and skepticism that the employees expressed towards AI adoption in the organization.

2 Theoretical background

2.1 Artificial intelligence

Artificial intelligence (AI) in its earliest stages of research was contrasted with human intelligence by researchers like Marvin Minsky in 1968 (Haenlein & Kaplan, 2019b, p. 17). This formed the basis for the definition of AI as a computer's or a machine's ability of simulating human intelligence (Glikson & Woolley, 2020, p. 627; Haenlein & Kaplan, 2019b, p. 17). Haenlein & Kaplan (2019a, p. 5) provide a more comprehensive and detailed definition, as they define AI as "a system's ability to interpret external data correctly, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation". As the definition highlights, data is in the center of an AI system, as the system gathers knowledge and learns autonomously from it by leveraging approaches from machine learning (Brock & Wangenheim, 2019, p. 116; Haenlein & Kaplan, 2019b, p. 17-18). The ability to learn and develop continuously is considered one of AIs defining characteristics, as it makes AI standout from prior technology, alongside its capability of collaboration and adaptation to human interaction (Haenlein & Kaplan, 2019b; Makarius et al., 2020; Lee et al., 2022, p. 2). As AI holds the ability for continuous and autonomous learning and development, it is applicable to perform even more complex and demanding tasks (Haenlein & Kaplan, 2019b).

AI covers a diverse number of technologies, that are often referred to as the domains or sub-areas of AI. They represent the different functions of AI technologies and act as enablers for more sophisticated AI systems performance (Haenlein & Kaplan, 2019b, p. 17; Deloitte, 2017, p. 4). According to Haenlein and Kaplan (2019a, p. 8) neural networks and deep learning, that is a form of machine learning, are used to generate the basis for most technologies considered AI. Other domains or sub-areas of AI include Internet of Things (IoT), robotics, computer vision, natural language processing (NLP), visual and speech recognition and rule-based systems (Deloitte, 2017, p. 4; Stone et al., 2022; Bankins et al., 2024a, p. 159).

Chowdhury et al. (2022, p. 33) conceptualize the applications of AI systems within business organizations to include automated intelligence, assisted intelligence, augmented intelligence, and autonomous intelligence. The term automated intelligence is used to describe the AI system's ability of automating a specific manual or routine task (Chowdhury et al., 2022, p. 33). In a service delivery process automated intelligence can be leveraged in the form of a chatbot or virtual assistant (Chowdhury et al., 2022). Assisted intelligence refers to the systems' ability of assisting human decision-making by providing humans with insights from data (Chowdhury et al., 2022, p. 33). Similarly with assisted intelligence, augmented AI augments human decision-making while simultaneously learning from the interactions (Chowdhury et al., 2022, p. 33). Autonomous intelligence applications are capable of autonomous development and learning, without the need for human intervention or guidance (Chowdhury et al., 2022, p. 33).

Specific to the industry and the applications of the technology, AI brings many benefits to organizations (Haenlein & Kaplan, 2019b, p. 18-20). These benefits include process efficiency and increased productivity, enhanced analytical capabilities, support and reduction of human errors in decision-making and increased quality of operations (Malik et al., 2022, p. 337; Lee et al., 2022, p. 2; Chowdhury et al., 2022, p. 32). In more detail, AI can enhance productivity and improve performance through automation and optimization of business processes (Lee et al., 2022, p. 2; Deloitte, 2017). AI enabled improvements in resource allocation can lead to cost reductions, as AI can take over routine tasks and release time for employees to work on other, more demanding tasks (Lee et al., 2022, p. 2). Other possible cost savings can result from improved factoring productivity and efficiency of processes (Brynjolfsson et al., 2019). In addition, AI is capable of augmenting human decision-making and judgement, and it can reduce possible human errors and biases by generating important insights and producing accurate predictions (Lee et al., 2022, p. 2; Deloitte, 2017, p. 8). AI is also used extensively as a major source of innovation in many organizations and by leveraging AI applications firms can amplify their competitiveness (Li, 2022, p. 3). Organizations can apply AI technologies to enhance the features and functionality of their products and services or even create new innovations

and access new markets (Lee et al., 2022, p. 2; Deloitte, 2017, p. 4). As highlighted, a wide range of possible AI applications exist, but only a fraction of them have been recognized yet (Brynjolfsson et al., 2019).

Considering its transformational impact on organizational life across industries and occupations, the future of work and employment seems uncertain and raises concerns (Bankins et al., 2024b). According to Bankins et al. (2024b, p. 2), AI influences work in three ways, by replacing work or work tasks, complementing or augmenting humans at work, or by creating new work tasks for humans. Many studies have focused on the first influence of AI, and the job destruction and job creation phenomena has emerged across industries (Huang & Rust, 2018). For example, Huang and Rust (2018) in their work introduce the theory of AI job replacement addressing this phenomenon in the service industry. Other studies have focused on the skills and knowledge of employees, indicating that AI poses a need for human capital development (Bodea et al., 2024; Bankins et al., 2024b).

However, in the context of human work, scholars have emphasized AIs capability of human augmentation rather than the replacement of humans (Chowdhury et al., 2022, p. 33; Jarrahi, 2018). AI combined with human resource management can create added value for organizations, employees, and customers (Chowdhury et al., 2023; Deloitte, 2017, p. 4) and as AI provides many possible applications and benefits to its usage, the collaborative nature of AI needs to be addressed in organizations (Malik et al., 2022). Chowdhury et al. (2022, p. 32) define collaborative intelligence as the effective collaboration and partnership between artificial and human intelligence. According to Bankins et al. (2024a, p. 163) collaborative intelligence is the use of such AI systems that support and interact with humans to produce wanted outcomes. Jarrahi (2018, p. 583) uses the term human-AI symbiosis to describe the same phenomena, and states that this interactive and collaborative relationship between humans and AI contributes to the development of both sides. Bankins et al. (2024a, p. 163) state that collaborative intelligence is the gateway for organizations to reach the benefits of AI adoption.

2.2 AI adoption

AI adoption is defined as the process of implementing AI enabled technologies into an organization and its core processes (Lee et al., 2022). An increasing number of organizations in various fields are preparing for the adoption of AI due to its many possible benefits and advantages, yet still the successful integration of the technology remains a key challenge (Lee et al., 2022; Deloitte, 2017, p. 12). Many organizations have focused on the technical side of the implementation process, and heavy investments on tangible resources have been made by companies (Lee at al., 2022, p. 3). However, previous research has shown that the actual users of the technology, that is the employees and other members of an organization, can have a significant impact on the success of such processes and therefore investing in human capital is highly necessary (Lee et al., 2022; Chowdhury et al., 2023, p.12). Accordingly, Chowdhury et al. (2022, p. 33) state that employees need to understand, trust, and adopt AI, so that the anticipated benefits of AI can be reached. Therefore, this research understands successful AI adoption as employee acceptance and behavioral intention to use the technology, going beyond just the implementation of AI technology or systems (Cao et al., 2021).

Prior research on the topic of AI adoption has utilized varying models and frameworks within different research disciplines. Resource-based view (RBV), knowledge-based view (KVB), organizational socialization frameworks and technology acceptance models have been used as the theoretical premises and based on them new models and frameworks have been created to specifically address AI adoption (Chowdhury et al., 2022; Chatterjee et al., 2021). In this research we will leverage previous research on technology acceptance and AI adoption that focuses on the employee perspective of the phenomena, excluding the models and theories focusing on the technical side or other areas of the AI adoption process.

Technology acceptance theories such as the Technology Acceptance Model (TAM) by Davis (1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) have been used previously to examine the factors influencing the adoption of new technologies in organizations (Trenerry et al., 2021, p. 3). Researchers like Cao et al. (2021), Chatterjee et al. (2021) and Lichtenthaler (2019) have later utilized the theories to AI adoption. The Technology Acceptance Model (TAM) created by Davis (1989) recognizes the need for addressing the nontechnical side of technology implementation, referring to the actual users of the technology, for organizations to achieve potential benefits of it. In their work Davis (1986, p. 24) presents user attitude as a major determinant of actual system usage as a part of the users work. Perceived usefulness, that is the level to which the users see implications for usage in a particular system, and to what extent the users believe to benefit from its usage in their work, and perceived ease of use, that is the level of effort and difficulty that the users connect to the system, and whether the user believes to be capable of using such system in their work effortlessly or with much effort, are two key variables that affect the users' attitude, and further the acceptance of new technologies according to TAM (Davis, 1986, s. 24). TAM2 is the extended version of TAM, that includes the variables of subjective norms and system-specific technology use in the model (Trenerry et al., 2021, p. 3; Venkatesh & Davis, 2000).

Following the work of Davis (1989) and other researchers in the field, Venkatesh et al. (2003) created the Unified Theory of Acceptance and Use of Technology model (UTAUT) with the intention of creating a singular unified model that explains the user acceptance and usage behavior of new technologies. The research conducted by Venkatesh et al. (2003) identified four determinants of user acceptance and usage behavior to include performance expectancy, effort expectancy, social influence, and facilitating conditions. In addition, four moderators were identified to include age, gender, experience and voluntariness (Venkatesh et al., 2003). The moderators affected how strong the influence of each determinant was (Venkatesh et al., 2003). In the model performance expectancy describes the employees' belief of possible performance gains resulting from systems usage and it is considered the strongest indicator of user intention. Effort expectancy

includes the effort and ease of use that the system requires (Venkatesh et al., 2003, p. 450). Social influence contains the individual perception of importance that others believe that they can use the systems (p. 451-452). Facilitating conditions is the individuals' perception of the organizational and technical infrastructures, and whether they believe that they are capable of supporting and facilitating the use of the system (Venkatesh et al., 2003, p. 453-454). The research conducted by Venkatesh et al. (2003) managed to connect the determinants to intention to use and further to actual usage behavior, providing insights on the important factors influencing the process of technology acceptance.

Researchers like Makarius et al. (2020) and Bonetti et al. (2023) have created specific models and frameworks considering the adoption of AI in organizations, addressing the unique and complex nature of the technology and its adoption. Makarius et al. (2020) studied the social element of AI and utilized Socio Technical Systems (STS) theory and organizational socialization approach to form the AI socialization framework. The AI socialization framework comprises of three phases, employee anticipation phase, AI-Employee encounter phase, and symbiotic metamorphosis phase (Makarius et al., 2020, p. 267). The employee anticipation phase happens before AI has yet to be brought into an organization (Makarius et al., 2020, p. 267). The phase consists of sensing employees' attitudes and uncertainties towards AI, addressing possible challenges and informing employees of the coming change and its implications (Makarius et al., 2020, p. 267). The AI-employee encounter phase occurs when AI systems are introduced into the organization and employees start to socialize with the AI systems (Makarius et al., 2020, p. 267-268). Symbiotic metamorphosis phase occurs after the successful integration of AI, and organizations can then expect to realize the benefits of AI adoption (Makarius et al., 2020, p. 269). Makarius et al. (2020) consider employee type and technological readiness to impact the phases, as employees may hold varying expectations and experiences regarding AI that influence how AI is encountered (Makarius et al., 2020, p. 267-268). Technological readiness refers to the organizations' capabilities of utilizing its technological assets, and higher levels of technological readiness can prepare organizations and

employees for the integration of a new AI technology (Parasuraman, 2000; Makarius et al., 2020, p. 269). Technological readiness may also moderate the expectations and attitudes that employees have towards AI, contributing to the anticipation and encounter phases (Makarius et al., 2020, p. 267-269). Sociotechnical capital that is according to Makarius et al. (2020, p. 265) "the combination of AI technology and people in organizations that leads to a source of competitive advantage for an organization" is the pursued outcome of a successful AI adoption process.

Bonetti et al. (2023) created the Practice co-evolution model to address AI adoption in retail practices. According to Bonetti et al. (2023, p. 867) practice co-evolution is defined as "the process that undergirds successful AI integration and enables retail employees' sustained usage of AI" and it includes the needed transformation, improvement, and modification of employee practices to successfully collaborate with the technology (p. 869). Practice co-evolution manifests in through three courses of action, co-envisioning, co-adaptation and co-(re)aligning (Bonetti et al., 2023, p. 870). In co-envisioning, the objectives of AI adoption are outlined and the action needed to reach them is planned accordingly. In co-adapting, the co-envisioned plans of action are adopted to usage in the given context, and they are modified to better suit it through co-(re)alignment actions (Bonetti et al., 2023, p. 870). Practice co-evolution is fostered through practice enablement, that is the knowledge possessed, shared and utilized by the employees taking part in the co-evolution process (Bonetti et al., 2023, p. 870). According to Bonetti et al. (2023) successful AI implementation relies on collaboration and the involvement of participants throughout the phases of co- envisioning, co-adaptation and co-(re)aligning.

Baabdullah et al. (2021) in their research investigating AI acceptance in B2B SMEs consider AI enablers, that are the driving forces promoting the adoption of AI technology. AI enablers include technology road mapping, professional expertise, and attitude (Baabdullah et al., 2021, p. 259-260; Shon & Kwon 2020). Technology road mapping stands for the strategic planning process of new technology implementations, including the research, development, and implementation of the technologies (Baabdullah et al.,

2021, p. 259-260). Professional expertise includes the employees' knowledge, skills, and experience of AI systems (Baabdullah et al., 2021, p. 260). Attitudes in AI adoption stand for the negative or positive feelings employees hold against AI (Baabdullah et al., 2021, p. 260; Cao et al., 2021). Baabdullah et al. (2021) found that technology road mapping and attitudes were significant to AI adoption success in organizations, disregarding professional expertise. Along with the contributing AI enablers, organizations' AI readiness, that is the organizations' abilities to support AI practices including technology infrastructure, awareness, and technicality, was concluded to significantly influence the acceptance of AI (Baabdullah et al., 2021).

As shown, the discussed technology and AI adoption research acknowledges the contribution of employee attitudes regarding the success of such organizational changes (Davis, 1989; Venkatesh et al., 2003; Baabdullah et al., 2021; Makarius et al., 2020). However, the research does not conceptualize or define the specific characteristics of employee attitudes nor explore their specific contributions in such processes. To further explore the meanings and importance of employee attitudes, this research now defines employee attitudes in general and utilizes change management research to provide a better understanding of their contribution to change processes in organizations. The few AI studies providing more thorough explorations and conceptualizations of employee attitudes are also covered in the following sections of this research.

2.3 Employee attitudes

Eagly and Chaiken (1993, p. 1) define attitude "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor". According to Eagly and Chaiken (2007) attitudes construe from three dimensions; tendency, entity (attitude object), and evaluation. Attitudes are created as an object is identified by the individual, and the object that can be in the form of concrete or abstract (Eagly & Chaiken, 2007, p. 583-584). The attitude object or entity is the target of evaluation carried out by individuals, and it can be "overt or covert, or cognitive, affective, or behavioral" (p. 583).

Eagly and Chaiken (2007) continue by making a distinction between experiencing attitudes and expression of attitudes. They highlight that attitudes are inner tendencies of individuals, and expressions are the manifestations of attitudes (p. 586). Past experiences affect the formation of either positive or negative tendency to respond (Eagly & Chaiken, 2007). They state that attitudes "can be formed or expressed through cognitive, affective, and behavioral processes" (Eagly & Chaiken, 2007, p. 592). Eagly and Chaiken (2007, p. 593) also recognize that attitudes can manifest as either explicit or implicit. Explicit attitudes are attitudes that the individual is aware of experiencing, and implicit attitudes are those that individuals experience unconsciously (Eagly & Chaiken, 2007, p. 593). Attitudes have been identified to guide human behavior (Glasman & Albarracin, 2006).

Following this definition of attitudes provided by Eagle and Chaiken (1993;2007) this research now aims to provide a comprehensive understanding of employee attitudes in changes and their contribution to AI adoption. Firstly, attitudes are discussed in this research from a change management perspective. This is done as change management research has contributed heavily to the research of employee attitudes in organizations and therefore provides a strong theoretical basis for this research. Another reason for this regards the small amount of AI research considering employee attitudes and their contribution to the success of AI adoption. Following the exploration of change management literature on employee attitudes, this research aims to cover the AI specific research that considers employee attitudes in AI adoption. This aims to provide insight to how AI researchers have defined and discussed employee attitudes, and how they are connected to the success of AI adoption in organizations.

2.3.1 Change management literature on employee attitudes

Organizational change is mandatory for organizations' success and survival (Matsunaga, 2022, p. 118). As organizations in their core are comprised of humans, the importance of those humans and their commitment to, support and acceptance of change is crucial

for successful organizational changes (Hechanova et al., 2018, p. 915; Choi, 2011). This individual centered approach has been recognized in previous research, as it's been stated that many change processes fail to succeed as change leaders have overlooked the importance of individual employees or as Al-Haddad and Kotnour (2015, p. 244) refer to it the personal dimension of change (Choi, 2011, p. 479). With this understanding of individual employees' importance in change processes, the importance of those employees' attitudes has proved its importance in previous research (Miller et al., 1994 & Choi, 2011). Change management can provide solutions to navigate organizational changes successfully, and it can be helpful when addressing the reactions and attitudes of employees in organizations (Hechanova, et al., 2018, p. 916). Change management is defined by Moran and Brightman (2001) as "the process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers".

Choi (2011) in their work present four key attitudinal constructs that are frequently present in research concerning employee attitudes in change. The constructs are readiness for change, commitment to change, openness to change and cynicism about organizational change. Other important emotions and perceptions relating to changes include skepticism, trust and anxiety (Stanley et al., 2005; Miller et al., 1994). The attitudinal constructs do not form in a void, but they are rather comprised of multiple factors (Choi, 2011). As managers cannot control what attitudes the employees are displaying, they can influence the factors contributing to those, such as the beliefs and values of employees (Oakland & Tanner, 2007, p. 17). Miller et al. (1994, p. 61) refer to antecedents, that are "the factors which influence employees' evaluation of whether the change should be supported, viewed with indifference, or opposed".

According to Armenakis et al. (1993) readiness for change contributes to the effectiveness and success of organizational change efforts. Readiness includes the individual's beliefs and perceptions of the need for change and the individual and collective abilities to overcome changes (Armenakis et al. 1993; Eby et al., 2000). Readiness is fostered by

communication and information sharing that justifies and provides support of the need for change (Armenakis et al., 1993). Building trust and confidence in the individual and collective abilities to overcome the change is also crucial, and it can be carried out through information sharing (Armenakis et al., 1993). Alongside trust, organizations should provide support and actively participate employees in the change (Armenakis et al., 1993; Eby et al., 2000). Readiness contributes to either resistance or support of change efforts, as building readiness disseminates resistance (Armenakis et al., 1993).

Openness to change is defined by Wanberg and Banas (2000) as the acceptance and positive view of changes, and it forms the basis for successful organizational changes (Miller et al., 1994). Openness includes the individual's willingness to cooperate and support the change and a positive perception of possible benefits resulting from the change (Miller et al., 1994). Certain individual characteristics have been connected to employee openness, such as cognitive and behavioral flexibility, curiosity and openness to experience, and need for achievement (Miller et al., 1994; Choi, 2011). Factors fostering openness include information sharing and change specific self-efficacy (Wanberg & Banas, 2000; Miller et al., 1994). Openness represents the opposite of resistance to change (Wanberg & Banas, 2000; Miller et al., 1994).

Commitment to change is defined by Herscovitch and Meyer (2001, p. 303) as the psychological mindset binding an individual to act in favor of a change initiative. It represents the individuals' willingness to participate and support the change, indicating a more positive affect (Fedor et al., 2006). Commitment construes of affective, normative and continuance commitment (Herscovitch & Meyer, 2001, p. 303). Affective commitment forms as an individual desires to take part in the change and they believe in the possible benefits that the change may bring. The individual may also sense an internal urge to act in favor of the change initiative (Herscovitch & Meyer, 2001, p. 320). Individuals expressing continuance commitment recognize possible costs with failure to support the change initiative and therefore feel like they don't have a choice in whether to do so or not (Herscovitch & Meyer, 2001, p. 320). Individuals experiencing normative

commitment feel a strong obligation and duty to work in favor of the change (Herscovitch & Meyer, 2001, p. 321). Commitment to change forms from factors including the nature of the change, its perceived fit with the organization, and provided information regarding the change (Choi, 2011; Shum et al., 2008). Other factors independent from the actual change such as organizational culture and the quality of relationships inside the organization, previous experience from similar situations and the employees' level of change self-efficacy also impact commitment (Shum et al., 2008, p. 1358-1359; Choi, 2011; Herold et al., 2007, p. 948). Job motivation and job satisfaction can also affect the employees' commitment to change (Parish et al., 2008).

Cynicism about organizational change is considered a negative attitude (Stanley et al., 2005). It is connected to organizational cynicism, that refers to the employees' beliefs and experiences of unfair actions and distrust, fraudulence or insincerity and negative affect toward the organization (Dean et al., 1998, p. 345; Choi, 2011). Andersson (1996) uses the term employee cynicism, that is defined as "an attitude characterized by frustration, hopelessness, and disillusionment, as well as contempt toward and distrust of business organizations, executives, and/or other objects in the workplace" (p. 1395). Cynicism can lead to employee behaviors that are against the organizations' benefit, and harm the employee itself as cynicism has been linked to many negative employee outcomes such as burnout and emotional fatigue (Choi, 2011; Dean et al., 1998, p. 345). In the organizational change context cynicism can appear as employees distrust in decision-makers and questioning of the motives and reasonings of the change and their fairness (Stanley et al., 2005). These can be based on employees' previous experience from failed change attempts or evaluations of decision-makers liability (Stanley et al., 2005). Employees experiencing cynicism towards change also usually blame the management and other organizational leaders of their negative reaction, and varying personality and situational factors impact the development of cynicism towards organizational change (Dean et al., 1998, p. 344; Choi, 2011). Closely related to cynicism, the attitude of skepticism is brought up or the two attitudes are considered as one unified attitudinal construct (Stanley et al., 2005). Taken apart from cynicism, skepticism towards organizational change

includes the questioning of the effectiveness and success of change efforts (Stanley et al., 2005).

According to Choi (2011, p. 480) each attitudinal construct reflects the individual's judgement of the specific change initiative, and acts as predictors of acceptance or resistance towards the change. Successful change processes require employees that are motivated and committed to the change and willing to co-operate, or in other words acceptive of the change (Proctor & Doukakis, 2003, p. 268; Miller et al., 1994). Commitment, openness and readiness are characterized as the more positive attitudes that promote change acceptance (Herold et al., 2007; Wanberg & Banas, 2000; Fedor et al., 2006; Choi, 2011). In contrast, cynicism and skepticism have been recognized by previous research to lead to resistance (Stanley et al., 2005). Resistance in change is common in organizations, as it can arise from employees feeling uncertain and fearing the unknown, they lack information about the change, they feel like the change may pose threats to their status, they fear failure or have trouble identifying possible benefits of the change (Proctor & Doukakis, 2003, p. 268). Consideration and management of resistance is crucial for change success, as it can bring costs and even delay changes (Pardo del Val & Martinez Fuentes, 2003, p. 148). Pardo del Val and Martinez Fuentes (2003, p. 149-151) identified the sources of resistance to include deeply rooted values, relating to political and cultural deadlocks inside the organization and its practices, and lack of necessary capabilities to accommodate the change process successfully. Other factors included unclarity in the need for change, lack of information sharing, differences in motivation and interest among employees and management, perceived fit between the change and the organization and felt cynicism (Pardo del Val & Martinez Fuentes, 2003, p. 149-151). They continue by stating that the transformational impact of change affects the level of resistance, indicating that the more disruptive the change is, the more resistance can be anticipated.

2.3.2 AI literature on employee attitudes

Previous research considering attitudes and AI has usually refers to attitudes in general, making distinctions between positive and negative attitudes. Dwidedi et al. (2017, p. 213) in their work considering technology adoption define attitudes as "an individual's positive or negative feelings about performing a target behavior". Utilizing this definition provided by Dwidedi et al (2017) in the AI adoption context, attitudes can be understood as an individual's positive or negative feelings about using AI.

Consideration of both the positive and negative attitudes is important as they have a major impact on acceptance of new technologies (Lichtentaler, 2019). In addition, Gursoy and Huang (2024) and Tong et al. (2021, p. 1625) make the notion that differences between employees and how they perceive AI should be addressed accordingly, as differences between organizations employees is likely to occur in the ways they react to the change and how they are able to benefit the implementation process of AI in organizations. By acknowledging and addressing the differences in the workforce, organizations can gain the benefits of AI adoption (Tong et al., 2021, p. 1625). Lichenthaler (2019, p. 41) also recognizes this need for active management of employee attitudes, as regardless of the attitudes positive or negative characteristic, they can still have negative effects on organizations change initiatives considering technological change. In addition, it has been stated that employees can experience both positive and negative attitudes simultaneously and exploring the root causes generating these attitudes and reactions in employees can further aid the AI adoption process (Bankins et al., 2024a, p. 167; Lichtenthaler, 2019). To better understand how attitudes are described and utilized in AI research, this research provides a brief outlook into previous research of the topic including the inspection of attitudes and their descriptions as well as the factors contributing to the formation of employee attitudes in AI adoption.

Cao et al. (2021) in their work examined middle and senior managers' attitudes towards AI and its impact on AI usage in decision-making. To describe and define the factors influencing the formation of attitudes and behavioral intentions, Cao et al. (2021)

developed the Integrated AI Acceptance-Avoidance model (IAAAM). The model considers attitudes as either positive or negative in their nature, that further contribute to either acceptance or avoidance behaviors. According to Cao et al. (2021) positive attitudes foster acceptance behavior (usage of AI systems) and negative attitudes foster avoidance behavior (disuse of AI systems). It was concluded in the research that expected performance gains and ease of use relating to the AI systems positively influenced attitudes. In contrast, personal well-being concerns relating to felt stress and anxiety and perceived threats the managers connected to AI negatively affected attitudes (Cao et al., 2021).

Lichtenthaler (2019) in their work provides a more detailed examination of the positive and negative employee attitudes and their effect on AI adoption. Lichtentaler (2019) defines intelligent automation -attitudes (IA) as the more positive attitudes that employees can hold towards AI. The employees expressing IA attitudes are more open to using AI solutions, as they hold a stronger emphasis on rational decision-making, convenience and optimization, and are able to comprehend the possible benefits that the AI systems could bring to their work (Lichenthaler, 2019, p. 41). The more negative attitudes are defined as no human interaction -attitudes (NHI) (Lichtenthaler, 2019). According to Lichtentaler (2019) the employees displaying NHI attitudes value and favor human interaction and characteristics and express limited openness to using AI solutions regardless of their usability (Lichenthaler, 2019, p. 40). Lower emphasis is put on convenience, efficiency and optimization of work processes, as the fears and concerns regarding the use of AI override the possible positive effects (Lichenthaler, 2019, p. 40-41). The negative attitudes employees experience are usually connected to fears and threats that the employees associate with AI (Bankins et al., 2024a; Lichenthaler, 2019). The uncertainties regarding how AI will affect the individual, their work and the organization can foster negative attitudes (Lichenthaler, 2019; Bankins et al., 2024a).

To better understand the formation of employee attitudes towards AI, Lichtenthaler (2019) lists five categories of factors that include personal characteristics such as openness and affinity towards new technology (1), the AI technology itself and its perceived

benefits and the ease or effort of use (2), voluntary or required use of AI (3), employee experience of using AI systems (4), and the environment (5). According to them, employees who are more open, technology-driven and convenience oriented are more likely to experience positive attitudes towards the introduction of new technology (Lichtenthaler, 2019, p. 42). Following TAM created by Davis (1989), Lichtenthaler (2019, p. 42) indicates that negative attitudes will be reduced if the employee perceives a potential benefit gained from using the AI application or system, and when the usage of the system does not require much effort. In addition, Lichtenthaler (2019, p. 42-43) states that the incentive and frequency of the interaction between humans and AI influences attitudes, as voluntary and routine-based use of technology positively affects attitudes, and vice versa. Little experience using AI systems or applications is likely to result in more negative attitudes but as employees gain experience from AI systems and applications, they are likely to go through a change in their attitudes from negative to more positive (Lichtenthaler, 2019, p. 43). Standardization of behavior is also a major contributor, as new behavior such as the usage of a new technology, becomes standard, fewer negative attitudes are reported (Lichtenthaler, 2019, p. 43). Incentives from inside and outside the organization affect the formation of attitudes alongside the social factor of AI that relates to the desirability to use the system and whether it is socially encouraged and accepted to do so (Lichtenthaler, 2019, p. 43).

In line with the work of Lichtentaler (2019), Gursoy and Huang (2024) in their work address the contradictory influence of AI integration on service employees' attitudes and examine their influence on employee service behavior. They propose two mechanisms that affect the formation of employee attitudes and reactions to AI integration by leveraging the transactional theory of stress by Lazarus and Folkman (1981). Following the theory, Gursoy and Huang (2024) consider the integration of AI as either a challenge or hindrance stressor for employees that is affected by individual and situational factors. Hindrance stressors are considered to have a more negative influence, and challenge stressors are perceived as more positive stressors, promoting motivation, development and achievement among employees (Gursoy & Huang, 2024, p. 2). What they found was

that employees who considered the integration of AI as a challenge experienced more positive outcomes and exhibited enhanced service behavior. In contrast, the employees who experienced the same situation as a hindrance had experienced increased job insecurity and their proactive service behavior declined (Gursoy & Huang, 2024, p. 6). Gursoy and Huang (2024) propose IT-mindfulness, that is according to Thatcher et al. (2018, p. 832-834) “a dynamic IT-specific trait, evident when working with IT, whereby the user focuses on the present, pays attention to detail, exhibits a willingness to consider other users, and expresses genuine interest in investigating IT features and failures”, as a mediating factor contributing to the formation of the stressors.

Bankins et al. (2024b) in their study researched AIs impact on work tasks, employees’ responses to changes and AIs effect on future work skills. Bankins et al. (2024b) propose that examining the influences that AI adoption has on employees, both positive and negative, can help to better understand the factors formulating the responses among employees. They recognize the varying responses that employees display relating to AI adoption as fear of replacement, positive and negative expectations of AIs impact and its applicability, and excitement and curiosity. Positive influences that employees perceive of AI, like AI enabled positive changes to work tasks and job design and perceived quality of the AI systems, promoted more positive reactions and attitudes towards AI (Bankins et al., 2024b, p. 3). Vice versa, the anticipated negative impact of AI on employees and their work, like increased controlling and monitoring of employees, affected the formation of more negative reactions amongst employees (Bankins et al., 2024b, p. 3).

Park et al. (2024) in their research concerning AI and attitudes considers AI specific attitudes in addition to general attitudes towards new technologies. According to Park et al. (2024) this inspection of AI specific attitudes enables more insightful information about the attitudes and their contributions to employee attitudes towards AI. The perceived humanlikeness of AI that includes the extent to which AI applications are perceived to possess human-like characteristics, and the perceived adaptability that includes the expected learning and adaptability capabilities of AI, capture the AI specific characteristics

of attitudes (Park et al., 2024, p. 924-925). Other attitudes included the quality of AI, AI use anxiety, job insecurity related to AI and personal utility (Park et al., 2024). According to Park et al. (2024) together the attitudes form a comprehensive description of employee attitudes towards AI in organizations. Further, the attitudes predict workers' intention to use AI and work outcomes (Park et al., 2024).

3 Methods

3.1 Case study

This is a qualitative case study that explores how employees experience and perceive AI adoption with the focus of conceptualizing employee attitudes. The research investigates a single organization and its employees in their natural environment. The case study method was chosen as it enables a thorough investigation of the case subject and presents the opportunity for exploring and understanding the complex social phenomena that is connected to the topic of research (Yin, 2009; Makarius et al., 2020). In addition, context specific characteristics and individual factors can be explored and understood utilizing the method in the research (Piekkari & Welch, 2020; Yin, 2009).

Yin (2009, p. 18) defines a case study as an "empirical inquiry that investigates a contemporary phenomenon in depth". Case studies are usually qualitative studies, although researchers can use quantitative methods or data as a part of a case study (Piekkari & Welch, 2020). Qualitative case studies utilize a large amount of evidence, that can be in the form of speech, texts, images, observations etc. (Piekkari & Welch, 2020). The evidence can be gathered through interviews, inquiries, documents, or by observations conducted by researchers (Yin, 2009). A case study can include the investigation of a single case or multiple cases, and the case that is the subject of the study can be an individual, a group, an institution, or a community (Gillham, 2010; Piekkari & Welch, 2020; Yin, 2009). The investigation is conducted within the natural context of the case (Piekkari & Welch, 2020; Yin, 2009, p. 18). Defining the context in case studies is important to enlighten the boundaries between it and the phenomenon (Yin, 2009, p. 18; Piekkari & Welch, 2020). Case studies aim to explain, explore, or describe a phenomenon, while answering how and why questions (Yin, 2009). The goal of conducting a case study is to generate additions to knowledge that can be further generalized to theoretical propositions (Yin, 2009, p. 15; Gillham, 2010). As Yin (2009) specifies, case studies are not meant to produce directly generalizable proposition to populations or universes

hence the value of a case study can be measured by its ability to expand and generalize theories.

According to Yin (2009) and Piekkari and Welch (2020) conducting single case study is a justified research method for certain types of case studies, including critical cases, revelatory cases, common cases and extreme or unusual cases. A critical case study tests previously presented and established theories in a specific context, whereas revelatory case studies examine cases that have not yet been studied by the researcher or researchers (Yin, 2009; Piekkari & Welch, 2020). Common case studies examine a typical case and in contrast, extreme or unusual case studies examine rare or exceptional occurrences (Yin, 2009; Piekkari & Welch, 2020).

3.2 Case subject

The case subject of this research is a single organization that sells and provides goods to consumers in Finland. The organization operates in several hundred locations in the country, producing tens of millions of customer interactions yearly. The organization also operates internationally, as they take part in business with product manufacturers and suppliers around the world. In 2023, the company's turnover was just over a billion euros, and their profit was around 40 million euros. Among their retail activities, the organization holds a specific societal purpose taking part in supporting the health and well-being of the Finnish society. The organization does not aim to maximize revenues or profits from their business activities, as the organization's primary goal is related to their societal purpose as a responsible retailer of consumer goods. The company strategy consists of four pillars, including a promise of high-quality service, inclusivity, sustainability and responsibility. Among responsibility, transparency in activities with stakeholders is highlighted as a defining characteristic.

The organization's actions are highly supervised and governed and a well-defined administrative order is present in the organization. The administrative power and influence are

distributed in the organization between different units, that includes an administrative board, organizational board and its committees, CEO and the executive team. The organization employs a couple of thousand people on average, and most of which are employed as salespeople. The organizational culture consists of feelings of solidarity, clarity and efficiency and it is described to result from supportive management and developing one's own competencies alongside knowledge sharing among the employees. Inclusion, acceptance, and diversity are described as defining constructs of the organization's staff, as it comprises of employees from different demographics such as age, sexual orientation, cultural background and religion.

The organization values highly the quality of customer service in their actions and as a way to create business value and competitive advantage. This translates to their investments in training and continuous efforts to support employee development throughout their careers. On-the-job learning is the main practice of competence development, and digital tools are utilized in the process. The competence of employees in the organization comprises of product knowledge, knowledge sharing and high-quality customer service. The payroll system in the organization is knowledge-based, and it offers opportunities for employees to influence their pay by developing their personal competence. The company holds a good reputation as an employer and has even received local acknowledgement as a result.

3.3 Data gathering

The data for the research was gathered through qualitative thematic interviews. Interviews as a data gathering method are commonly used in various fields of research, as they are applicable to many research purposes (Hirsjärvi & Hurme, 2022). Interviews as a data gathering method refer to the process of gathering opinions, thoughts and views of humans, or the interviewees, in verbal form about the study subject (Hirsjärvi & Hurme, 2022). In an interview two or more people as in the interviewer and the interviewees meet each other to have an interaction about the study subject. During the

interview, the interviewee paints a picture of their reality and how they perceive it, and that is communicated to the interviewee with words and expressions (Hirsjärvi & Hurme, 2022). Interviews in their core are social interactions between two or more people, and many factors contribute to their success as a method (Hirsjärvi & Hurme, 2022). It is important to consider the entirety of the research and their contribution to it, and the value of definitions, meanings and factors relating to language and linguistic expressions (Hirsjärvi & Hurme, 2022).

The interviews can have differing forms, meaning that they can be open, semi-structured or structured in their character. Hirsjärvi and Hurme (2022) introduce the definition of thematic interviews in their work. Thematic interviews as an interview form are placed between structured interviews and unstructured interviews, and they are sometimes referred to as semi-structured interviews (Hirsjärvi & Hurme, 2022). The defining character of thematic interview is that the direction or focus of conversation is directed to certain subjects by the interviewee, rather than certain specific interview questions (Hirsjärvi & Hurme, 2022). The subjects are defined beforehand by the interviewee and the presumption in thematic interviews is that the experiences, thoughts, beliefs and emotions of an individual can be examined when leveraging this method (Hirsjärvi & Hurme, 2022).

Interviews were chosen as the method for gathering the research material, as it gives the opportunity to bring out underlying motives while enabling flexibility and adaptation during the procedure, as well as support for the human centered perspective of the study (Hirsjärvi & Hurme, 2022). The interviews conducted in this research were semi-structured thematic interviews between the interviewer and a single interviewee. The interviewee had selected certain themes for the interviews that guided the direction of the interview, but no specific interview questions were defined beforehand. The intention was to carry out interactions with the interviewees that would generate deep and valuable information for the research (Hirsjärvi & Hurme, 2022). It was predicted that the subject of the research may emerge strong emotional reactions from employees as well as varying opinions and meanings underlying them. The interviews enabled

expression and capturing of these emotions and reactions to the subject, that would have otherwise been left uncaptured if other data gathering methods were utilized (Hirsjärvi & Hurme, 2022). The aim of the interviews was to generate open answers, and the interviewees were encouraged to answer the questions with their own words, describing their own experiences, emotions, expectations and possible prejudices that they had about the study subject. Thematic interviews as a data gathering method enabled this, as the importance of individual's interpretations and meanings are in the center of the method (Hirsjärvi & Hurme, 2022). To enable the capturing of possible sensible employee experiences and reactions the participants were promised anonymity (Gioia et al., 2012). In addition to conduct ethical research, the participants were informed about the research proceedings before signing their consent to take part in the research.

A cross-sectional study design was utilized to gather the evidence for the study. The interviews were conducted in direct interaction between the interviewee and the interviewer during the months of May and June of 2024, and the duration of the interviews varied between 40 minutes to 1.5 hours. The interviews were recorded and later transcribed into written text. It was planned that the interviews included 10 to 15 people from inside the case organization and eventually 14 participants were interviewed. It was specified that the participants consisted of sales personnel, excluding managers and other job positions inside the organization. Participation in the interviews was voluntary, and interest to participate in the interviews was requested and selection of participants was conducted based on the responses. The large number of willing participants made it possible to select the interviewees to best serve the intention of the study. The selection of interviewees was made to generate a data set that reflected the organization comprehensively, as employees representing both genders and varying age groups, educational backgrounds and varying tenure in the organization were selected. 12 of the research participants were female, and the remaining 2 males. The participants will be later referred to as Participant 1, Participant 2 and so on based on the order of interviews conducted.

3.4 Analysis methods

After the data was gathered, a qualitative analysis was conducted. A qualitative analysis concentrates on the content of the data (Gunther & Hasanen, 2021). By analytically examining the content interpretations can be made about it, and those interpretations can be further inspected by contrasting them with theory. A major part of qualitative analysis is the researchers own thinking and its contribution to it (Gunther & Hasanen, 2021). A data set itself does not give ready answers for research questions, as it is the analysis that produces the insights to the subject and more information about the research topic from a chosen viewpoint (Gunther & Hasanen, 2021). The aim of qualitative analysis is to refine the data set to then be able to examine and draw conclusions about the content in relation to the research questions (Gunther & Hasanen, 2021).

Different forms of qualitative analysis utilize and position theory differently (Saaranen-Kauppinen & Puusniekka, 2006). In data-driven or inductive analysis the formation of theory is the aim of the analysis, and the data set is the starting point for the process excluding previous views, opinions and conclusions from it (Saaranen-Kauppinen & Puusniekka, 2006; Tuomi & Sarajärvi, 2018). No units of analysis are defined beforehand, as the data determines what is the focus of the analysis (Saaranen-Kauppinen & Puusniekka, 2006). When utilizing theory-driven or deductive analysis, the analysis is based on existing theory or theoretical model (Saaranen-Kauppinen & Puusniekka, 2006). The analysis includes testing the chosen theory or theories in contrast to the research data and research topic (Saaranen-Kauppinen & Puusniekka, 2006). This means that the units of analysis are defined in advance (Saaranen-Kauppinen & Puusniekka, 2006). Theory-directed analysis is usually located between inductive and deductive forms of analysis, as it combines the two (Tuomi & Sarajärvi, 2018). In theory-directed analysis, theory can aid the analysis by guiding it based on previous information on the topic, but no units of analysis are determined in advance (Tuomi & Sarajärvi, 2018). The aim is not to test theory or theoretical models, but rather to create new insights to the topics previously presented in research (Tuomi & Sarajärvi, 2018).

Different methods for data analysis, that are the actual ways and actions of handling the data, have been presented in previous research, and the researchers should choose the analysis method that best suits the aim and nature of the research in question (Gunther & Hasanen, 2021). When discussing qualitative analysis methods, content analysis is usually brought up as a method for conducting analysis on qualitative data (Vuori, 2021; Gunther & Hasanen, 2021). Content analysis focuses on creating a description of the research subject with the examination of the data set (Vuori, 2021). Different forms of content analysis, such as coding, thematization and typologies, are traditionally linked to qualitative analysis (Gunther & Hasanen, 2021). They can be used as the actual method for analysis or as a basis for more specific analysis methods that are based on varying theoretical-methodological constructs (Gunther & Hasanen, 2021).

This research utilizes thematic analysis created by Braun and Clarke (2006) and the Gioia method presented by Gioia et al. (2012) as the analysis methods. This selection of analysis methods provided a basis for conducting a data-driven analysis of qualitative data that is compatible with the data gathering method of this research (Gioia et al., 2012; Braun & Clarke, 2006). The focus of thematic analysis is on identifying commonalities in the data, that are the common ways in which people discuss a certain topic. Those commonalities form patterns of meaning, that are the themes generated from the data (Braun & Clarke, 2012). Part of the analysis is the exploration, analysis and interpretation of the patterns (Braun & Clarke, 2006, p. 79).

The Gioia method is a mode of thematic analysis. It is applicable for this type of research as it was created specifically for exploring organizations and organizational life (Gioia et al., 2012). The focus of the Gioia method is on concept development (Gioia et al., 2012). Gioia et al. (2012, p. 16) define a concept as “a more general, less well-specified notion capturing qualities that describe or explain a phenomenon of theoretical interest”. In addition to concept development, the Gioia method can be utilized to generate new theories, or the developed concepts can be further formulated into measurable constructs

(Gioia et al., 2012). The main assumptions that the method is based on include the assumption of the organizational world being socially construed and that the members of these organizations are capable of comprehending and explaining their actions, objectives, thoughts and experiences (Gioia et al., 2012). The Gioia method requires thorough, systematic and analytical work from the researcher, that produces credible research findings (Gioia et al., 2012).

Gioia et al. (2012) state that the analysis is embedded with data gathering, as the first stage of analysis includes the exploration and identification of informant terms adhered from the data set. This stage of analysis is referred to as 1st order analysis, that aims to generate 1st order categories and to label those categories while preserving the informant terms used (Gioia et al., 2012, p. 20). After the initial 1st order analysis, the generation of 2nd order themes follows as the 1st order categories are formulated into larger entities (Gioia et al., 2012, p. 20). Connections and patterns between the categories are explored to produce these 2nd order themes, and their meanings are examined and interpreted (Gioia et al., 2012, p. 20). According to Gioia et al. (2012) a central part of 2nd order analysis is to explore the generated themes and whether they propose a possible concept regarding the research question. The 2nd order themes are then further refined into aggregate dimensions (Gioia et al., 2012).

Following the 1st and 2nd order analysis the formulation of a data structure is carried out (see Figure 1.) (Gioia et al., 2012). The data structure is used as a tool to visualize the data and to provide structure for further analysis (Gioia et al., 2012). When presented with the results of the research it also provides a visual representation of the data and a re-enactment of how the analysis proceeded, enhancing the credibility of the analysis (Gioia et al., 2012). The final stages of analysis include contrasting the themes and concepts with each other and the data, inspecting whether the formulated data structure provides a comprehensive view of the data and contrasting previous research and literature with the findings (Gioia et al., 2012, p. 21). Revisiting the data and revising the

themes are allowed, as the method enables this kind of flexibility to the research (Gioia et al., 2012).

Acknowledging the influence of the researcher is important when utilizing the Gioia method, as their interpretations of the data are central when forming the categories and themes and reporting the findings of the research (Gioia et al., 2012). The credibility of the research findings is construed by systematic work, providing of the data structure as part of the research findings (see Figure 1.) and supported by the extracts drawn from the data set (Gioia et al., 2012; Braun & Clarke, 2012).

In this research, the initial steps of analysis after data gathering included the transcription of the data set from the interview recordings into written text. This was done so that the data set was easier to process in the following stages of the analysis (Gunther & Hasanen, 2021). Increasing the quality and credibility of the data set and following the guidelines of the Gioia method, the transcription was carried out with precision, so that the informant terms and other contents were preserved and remained visible in the data in their original form and nature (Gioia et al., 2012; Hirsjärvi & Hurme, 2022). Accordingly, familiarization with the data was continued by listening to the recordings, reading through the transcriptions and making notes about the data. Reducing the data from inessential information that did not hold any value regarding the aim of the research was also carried out (Braun & Clarke, 2006, p. 87).

After the initial steps of the analysis, the 1st order analysis was carried out. A large number of first order categories emerged as a result of manual processing of the data. The data set was processed manually throughout the analysis, as it allowed the close exploration and familiarization with the data in accordance with the Gioia methodology (Gioia et al., 2012). Following this the 2nd order analysis began with exploring and identifying similarities and differences between the categories and formulating the 2nd order themes based on these factors. The 2nd order themes were then contrasted with the research question, and evaluation of whether they provided relevant information or

insight into the topic of the research was conducted. This evaluation was done so that the essential 2nd order themes could be identified from the data and further successfully formed into aggregate dimensions, leaving out themes that did not provide relevant information or contribute to the purpose of research (Gioia et al., 2012).

After the 1st and 2nd order analysis were conducted and the aggregate dimensions, or in this case the attitudinal concepts were formed, a thematic data structure was formulated to visualize the analysis and its findings (see Figure 1.). The thematic structure aims to explain what the concepts were based on and how they were formed from the data (Gioia et al., 2012). The final stage of the analysis included the reporting of the findings in written form (Braun & Clarke, 2012). The findings discuss each attitudinal concept in detail, describing the 1st order categories and 2nd order themes significance and contribution to the interpretations made by the researcher. Data extracts are included in the findings to create a structure for the analysis and work together to support the storyline created in the analysis (Braun & Clarke, 2012).

4 Findings

The research findings provide an outlook of the different and varying attitudes the employees expressed towards the introduction of AI in their organization. The attitudes were formed based on the exploration and interpretation of the perceptions, anticipations and expectations and their meanings, described and expressed by the employees regarding AI adoption in the organization. By identifying the similarities and differences of these factors, four main attitudinal concepts were formed utilizing the Gioia methodology (Gioia et al., 2012). The attitudinal concepts gathered from the data include employee openness, commitment, cynicism and skepticism towards AI adoption.

The attitudinal concepts and their defining characteristics are covered in the thematic structure below (see Figure 1.), including the initial 1st order categories and 2nd order themes. The thematic structure provides an overview of the research findings with the aim to clarify the defining and differing characteristics of the attitudinal concepts. The attitudinal concepts are discussed in the following chapters in more detail.

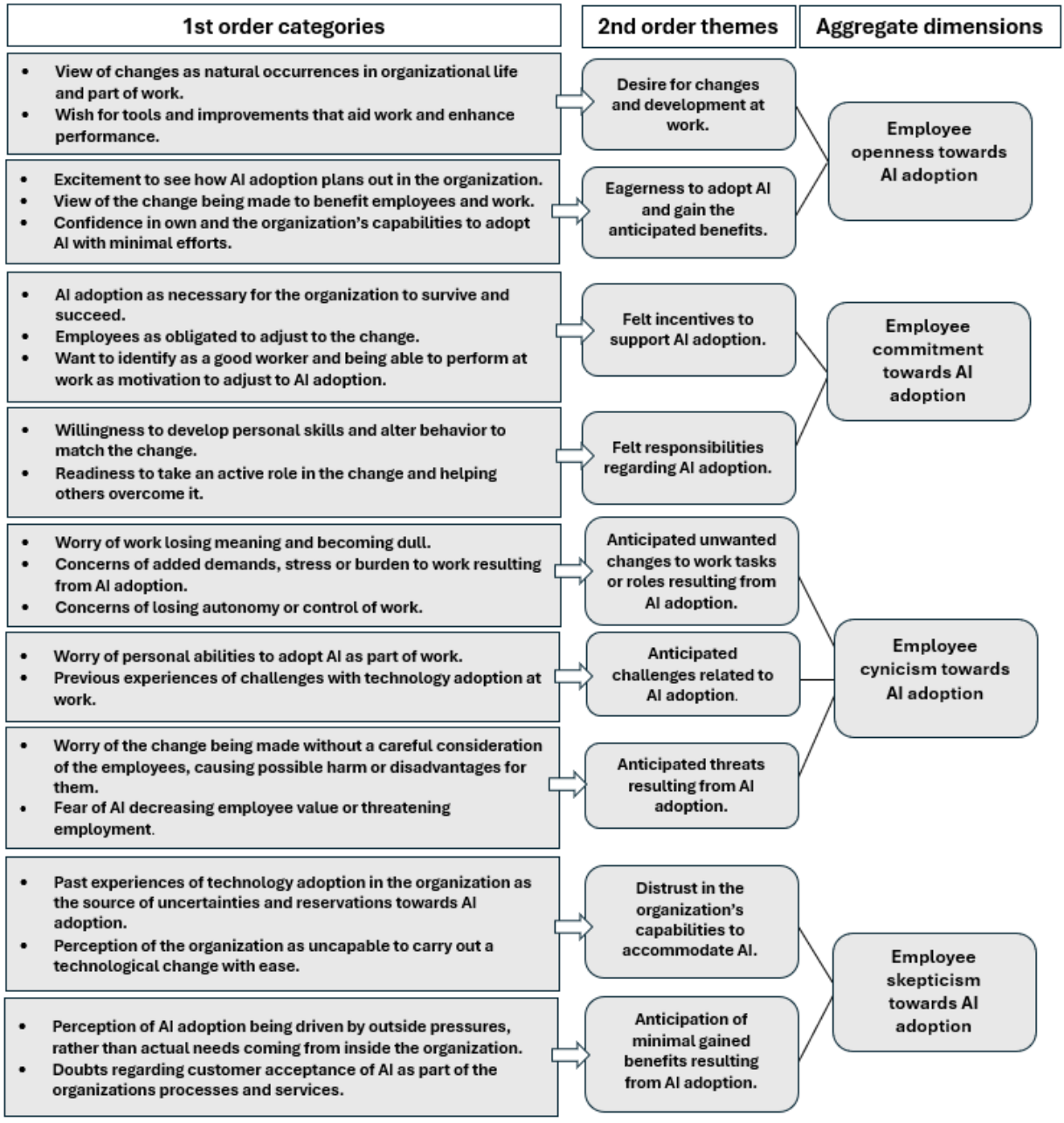

Figure 1. Thematic structure of employee attitudes in AI adoption

4.1 Employee openness towards AI adoption

Employee openness towards AI adoption appeared in the data as *employees' desire for changes and development at work* as well as *eagerness to adopt AI and gain the*

anticipated benefits of AI adoption. It was characterized by positivity and optimism, as the employees described their expectations and perceptions regarding AI adoption. Employee openness towards AI adoption was concluded to portray a more acceptive attitude towards the technology and the changes brought by it. Employees worded and described the adoption of AI positively, indicating that the change was welcome, wanted and possibly provided benefits and opportunities for them, their work and the organization.

> (1) I believe it is a really good opportunity, more in a way like, it is in a positive way fun to see, where it takes us. And yes definitely, we have to keep up with it. We can't think that we can forever keep doing things a certain way like we have before. (Participant 2)

In extract 1 Participant 2 describes viewing the change as an opportunity and indicates a positive, welcoming outlook towards the change. They imply that changes are necessary, showing an understanding of changes being a natural occurrence in organizational life. Other employees expressed a different source of openness as they wished for tools or other aids that would lighten their workload or release time for them to focus on more important tasks, such as serving customers or tasks demanding precision. Some believed that changes in general brought positive additions and variety to their work, making their work more interesting and enjoyable. This was concluded to indicate employees' desire for changes and development at work in general, that was connected to employee openness towards AI adoption.

Alongside a more acceptive outlook towards changes in general, part of the employees expressed curiosity towards AI and its adoption in the organization. Some of them described having a personal interest in the topic, and they were already familiar with the phenomena and had started experimenting with AI outside of work. The employees were keen to get more information about AI and what possibilities it could bring and how it would impact their work. They described having an interest to see how AI would

be implemented into their work and the organization, indicating excitement and eagerness towards it.

> (2) And like kind of curiosity and interest in the topic. So, I believe I would be excited to start using it for the reason as I am interested in the topic in general. It would be exciting to see how it would be implemented to my own work here. (Participant 7)

In extract 2 Participant 7 describes having a personal interest in the topic and excitement to start using AI as part of their work. They express eagerness to see how AI adoption will plan out in the organization and how it will impact their work. This was concluded to indicate a more open and acceptive attitude towards AI adoption.

Eagerness to adopt AI was also connected to beliefs of employee consideration in the planning and execution of AI adoption and the anticipation of AI adoption requiring minimal effort from employees. The employees had positive anticipations of the change consequences, as they assumed that reason AI was brought into the organization was to benefit them or their work and they felt that they could trust that the organization could facilitate a successful adoption of AI that considered the employees' benefit and interests. The employees were eager to gain benefits resulting from AI adoption, as they anticipated that AI adoption could result in varying benefits, including augmentation of employees in service tasks through AIs knowledge sharing and gathering capabilities, enhanced and more effective performance through better system quality and operations, and better time management and resource allocation. As the participants believed that AI was brought into the organization to provide employees with these possible benefits and they would come across minimal challenges while doing so, they were open towards its introduction and acceptive of it as part of their work.

> (3) Surely, I believe it will only bring benefits. I see it as a positive, that they are trying to bring AI into our work too and we get – I mean it is only going to be easier if you don't have to remember everything and AI is there to help you. And I think even with that you are

> bringing some AI system into an organization of this size, that is present in every store for example, then I trust that by that point it will be reviewed and tested enough so that it surely won't cause any harm for us. (Participant 6)

In extract 3 Participant 6 describes their perception of AI as part of their work. They describe the adoption of AI as a positive change and anticipate gaining benefits resulting from AI adoption. They also believe that AI adoption isn't likely going to cause any harm for them or their work indicating trust in the organization's capabilities to adopt AI, anticipating that AI adoption would not have a negative impact on them. This was identified to indicate a more open and acceptive attitude towards AI adoption.

4.2 Employee commitment towards AI adoption

Employee commitment towards AI adoption was conceptualized to form from the employees *felt incentives to support AI adoption* and *felt responsibilities regarding AI adoption* in the organization. It manifested in the data as employees' urge to act in favor of the change and willingness to overcome the changes brought by AI. This meant the employees sensed incentives to support and actively participate in the change process and alter their behaviors accordingly to match the change.

Employees felt incentives to support AI adoption as they described perceiving AI adoption as necessary for organizational survival and success. Part of the employees believed strongly that AI adoption was a way for the organization to develop their competitiveness and exist in the future. This created an urge for the adoption of AI and made the change appear reasonable and necessary from the employees' perspective. Others had a strong belief that AI was "present day" and it inevitably be a part of their work and the organization and justified the change based on this assumption. These factors were concluded to bind the employees to the change, as they showed willingness to support it.

> (4) But sure, I do also understand it that if AI is really changing the world as much as it is claimed to change it then we can't afford to be late with it. We must explore these options so that we don't notice in 5 or in 10 years or in 15 years that "Oh damn, this should have been done earlier". So absolutely it is good that we are involved in development, exploring, as we should be. So, when someone discovers how commerce is revolutionized by AI we are prepared for it. (Participant 7)

In extract 4 Participant 7 expresses an understanding of AIs possible transformational impact, and they are capable of viewing AI adoption from an organizational perspective, as something necessary for organizational survival and success in the future. This created an urge for change in the employee's mind, and as they can justify the change and believe that it is necessary, they imply support for it.

Other employees were identified to experience commitment towards AI adoption as they described experiencing obligations and commitment to their work and the organization in general. Others experienced incentives to support and act in favor of the change to come from above, from the organizational leaders in the form of orders that the employees were then expected to obey. Other employees felt a strong need to perform and succeed in their work, and to preserve their competence, as they wanted to identify as a good worker and be viewed by others as such. This inner incentive tied them and their actions to support AI adoption in the organization.

> (5) If I am good at something, I have always been good at my work. So that I want to be able perform at work and like I want to – I can admit it if I can't do something, but I have always been willing to learn. So, I think that that is one of my best skills that I am not ashamed to ask. And that I want to know what I am supposed to do, and I want to know how to do it. So, if it is somewhat overwhelming, then I will just have to carry on even if it takes 100 or 1000 repetitions. But I believe it is professional ability, that I am up to date. (Participant 9)

In extract 5 Participant 9 describes a want to succeed at their work and to identify as a good worker. This inner need for performing in their work and being viewed as a good worker promoted the employee's willingness develop their personal competence to match the change and even overcome challenges related to the change process. This was concluded to indicate the employee's commitment towards AI adoption.

Employee commitment towards AI adoption was identified in the data as the employees described their responsibilities regarding AI adoption in the organization. Part of the employees expressed a voluntary willingness to develop their skills and alter their behavior accordingly to match the change. The employees experienced that AI adoption posed a need for them to develop their skills and most of the participants pleased to do so. Others even expressed readiness to take on an active role in the change. Taking on an active role meant being self-driven and actively supporting change through their own actions and behaviors as well as helping others overcome the change.

(6) Definitely I will need to develop my own skills, yes. I feel like my current skills are enough for me to quickly take up new things and like it is easy to accustom to new things. For sure it is a place for learning new things. (Participant 2)

(7) I think it's probably because I view it positively and I think it is a really interesting thing and a good addition that will surely enable a lot. Then that helps with, that I can surely with my own attitude influence the surrounding team's attitude and capability to take the new thing as their own. (Participant 2)

In extract 6 Participant 2 recognizes that the change poses a need for personal development, and they express readiness and willingness to do so. In the following extract 7 they indicate that they see themselves as having an influence on change through their own actions. They imply support for the change and willingness to assist other employees during the change process. These factors were concluded to indicate Participant 2's commitment towards the change.

4.3 Employee cynicism towards AI adoption

Employee cynicism towards AI adoption was conceptualized as a more resistive and negative outlook towards AI adoption in the organization. Cynical attitudes were based on fears, threats, concerns and worries that the employees connected to the adoption of AI. It was construed on the *anticipated unwanted changes to work resulting from AI adoption,* the *anticipated challenges related to AI adoption* and the *anticipated threats resulting from AI adoption.* Cynicism was identified to manifest in the data as employee's hesitance to take part in the change and reluctance to support the change through their own actions. This created an atmosphere that AI was unwanted and unwelcome into the organization.

Part of the employees felt cautious about the change and expressed various concerns regarding the introduction of AI into their work and how AI would change the content or nature of work, their work tasks or roles at work. AI adoption was anticipated by the employees to negatively influence their job-satisfaction as it could take over parts of work, making work duller and unvaried, producing less experiences of succeeding at work and decreasing the experienced meaningfulness of work. Other employees felt cautious by the introduction of AI into their work, as they felt that AI could increase their competence and performance demands. They felt that if AI would take over basic level tasks from humans, human employees would then be expected to possess more expert level competence, increasing competence demands. Also, some participants worried that they would end up competing with AI, if AI would take part in service tasks. The employees then felt that they would need to prove their competence to customers as well as having to prove their value as employees to the organization.

> (8) If something like this came, then certainly there would be less need for employees. Then it would probably create some kind of competition there. Like how much of a service person you need to be yourself, what to know and do, and how much of a personality you need to be in situations and how full on you need to perform in every situation. Maybe it also depends on what the premise is for why AI

> is introduced. Like are we talking about a screen of some sort or is it just a, like basically an option or is it introduced as more like "Hey now you can do everything with AI, you don't need to talk to anyone!". I mean that, you can launch it very differently - are we launching it as assistance or as replacement. (Participant 6)

In extract 8 Participant 6 discusses AI that is utilized in customer service. They express their worry of AI increasing performance and competence demands for employees, if AI was to be utilized in service tasks. They feel like they might end up competing with AI or having to intensify their performance at work. In the same extract, Participant 6 also brings up the relevance of AIs application for their reactions to the change. They implied having differing attitudes towards the different applications of AI as they sensed that AI that was meant to replace human workers created a threat for employees and therefore, they indicated having a more negative attitude towards it.

Relating to the unwanted changes that AI was anticipated to bring to work, part of the employees expected that the AI systems or applications would be of low-quality and therefore provide poor user-experiences. AI adoption was then feared by the employees to result in increased technical challenges, heavier workload and added stress to work. Other concerns related to AI technology usage at work included the concern of how AI adoption would affect employee roles and responsibilities at work. The employees described not wanting to lose control over their work to AI and felt the need for autonomy over their work. Part of the employees also expressed troubles trusting AI, as they did not perceive AI as adequate to independently perform tasks in the workplace, and described having a need to govern AI.

(9) Well I don't want it to gain too much power. I do enjoy holding the strings in my own hands and like for example I like these stores where we do a lot of independent work in the sense that I am then in control all the time and I know what is going on. Then kind of that, if AI was to take too much of that control away from me. (Participant 12)

What do you mean by taking control away from you? (Interviewer)

> Like probably that like it would independently do all the background things, like everything related to cargo and stuff. Like I would have to always go and check them every day like is it correct and does the product quantities match and so on. (Participant 12)

In extract 9 Participant 12 expresses the concern of AI possibly decreasing their autonomy at work. They describe wanting to be in charge of their work and having a sense of autonomy and control. In addition, they indicate distrust towards AI systems performance, as they would need to review that the systems have operated correctly. This was concluded to signal a negative affinity towards AI and further indicate employee cynicism towards AI adoption in the organization.

Other employees anticipated coming across challenges during the AI adoption process, as well as when using the systems as part of their work. The employees expressed concerns about their own abilities to accommodate the change, perceiving the adoption process as possibly more difficult and uneasy. In addition, previous technical changes in the organization were experienced to be challenging. The employees described that the previously introduced technologies had not been fully developed to perform adequately and therefore the initial stages of the adoption process were experienced as difficult and frustrating. In addition, the employees described not having received enough support to overcome the changes. This made the employees more reluctant to adopt AI.

(10) Maybe in a way that can AI be like a runaway horse, that like kind of gets out of hand. So that am I able to control it and keep the bridles with me like I want to and understand to. Because in a way my own power of comprehension and understanding of it or AI is quite limited, so that. And then, however much I would try to gather information for myself about it, everything changes all the time and like goes forward, that like I know I wouldn't be able to keep up with it.

And yes, I – I don't really have that self-initiative to it. So, I'm hoping that there would be, like some mandatory courses here, that we would need to go through and pass. (Participant 11)

In extract 10 Participant 11 discusses their personal abilities to overcome the change and related concerns that they had addressing AI adoption. They anticipate that they would have difficulties keeping up with the rapid pace of development and changes relating to AI, as they have limited knowledge about AI and perceive themselves as slower adapters. They describe not having a self-initiative to act and support the change, but rather expect it to come through obligation and mandatory actions ordered from organizational leaders. This kind of negative anticipation of AI adoption was connected to employee cynicism towards AI adoption.

The third source of employee cynicism towards AI adoption was identified to include the possible threats that the employees connected to AI adoption. The concerns expressed by the employees included the worry about the change being made on the employees' expense or without careful consideration of employees in the change, indicating distrust towards the decision-makers and leaders of the organization. Some of the participants expressed concerns about their position in the organization, as they anticipated that AI adoption would affect how valuable human work would be. In relation, fears of AI replacing human work were expressed. Part of the employees believed that AI was adopted with the pursuit of financial goals in the form of cost reductions. The adoption of AI was then concluded to result in replacements of human employees or reduction of work hours by the participants.

> (11) I'm not sure if it could take over cargo or something like that. But then again like will it make us useless here. Like it is so hard to think of it like, as I already feel like we do have these tools here already. Like if AI was to take over cargo then I would have more time to serve customers, like better. But then it would most certainly end up with us (employees) being decreased from here if we end up to it. Like of course that if it didn't – I wouldn't have to be afraid that will my work be decreased. (Participant 14)

When discussing the possible use cases of AI in the organization with Participant 14, they seem to evaluate the possible benefits and risks of AI adoption. They see that AI adoption would benefit their work by freeing time for them to focus on more important tasks

but seem to connect the fear of job-displacement to it simultaneously. This fear of job-displacement seems to override the perceived benefits of AI adoption in the employees' mind and therefore makes them perceive the adoption of AI in a more negative light, indicating cynicism towards AI adoption.

4.4 Employee skepticism towards AI adoption

Employee skepticism towards AI adoption was concluded to comprise of the negative employee expectations of the success of AI adoption in their organization. The employees expressed uncertainties and cautiousness, that were concluded to signal *distrust in the organization's capabilities to accommodate AI* and an *anticipation of minimal gained benefits resulting from AI adoption.* The employees reflected on past experiences in the organization and made evaluations of the decision-makers' and organization's capabilities based on them. Skepticism characterized a more negative and critical attitude towards AI adoption, that comprised of employee doubts and reservations.

Many participants felt cautious towards the introduction of AI into their work and the organization. Their previous experiences with technology adoption in the organization were negative, weakening the employees' trust towards the organization's capability to carry out a successful AI adoption process. The employees made judgements about whether the changes were necessary, well designed and well executed, relating to the perceived ease of learning and adaptation of previous technical changes in the organization. Previous experiences highlighted the organization's inability to accommodate such changes successfully from the employees' perspective and had left the employees with uncertainties regarding future change processes.

> (12) I'm excited that it's explored, I'm excited about it and with a positive mindset that we are being brave and exploring it. But maybe relating to what these system deliveries have been before, that they have always been everything else but good and easy. Especially like that they may have been, that they are later developed to be good,

> but that the first stages have been absolutely horrible. Then in that sense I'm more on the negative side. Like I do hope that now it won't yet again be like "Fuck, why did we have to start using this?" and then it's maybe in a year and a half or from two years from now it's good. So yes, I'm reservedly curious. (Participant 7)

For Participant 7 the previous experiences of technical changes in the organization had left them with reservations towards upcoming change processes. In extract 12 they expressed excitedness and curiosity towards the change, but the previous experiences had created reservations and shifted their attitudes into more negative. What made the experiences negative was that they had experienced that the previous systems introduced to the organization were of bad quality, providing poor user experiences and creating frustration and other negative feelings, that resulted in perceived difficulties in the usage and adaptation process. This was concluded to indicate employee distrust in the organization's capabilities to successfully adopt AI and further indicate a more resistive and skeptical attitude towards AI adoption in the organization.

In addition to the expressed distrust in the organization's capabilities to accommodate AI, the employees anticipated to gain minimal benefits from AI adoption. Uncertainties were expressed regarding the change drivers and motives, as the participants questioned the reasons why AI was brought into the organization and whether the change was necessary. Some employees assumed that the change was driven by outside pressures and therefore felt skeptical about the necessity of change in the organization. As the employees felt that there was no clear need for AI coming from inside the organization, they also felt more skeptical about the success of the change and whether it would actually benefit the employees, work or the organization. This also supported the finding that the employees had trouble trusting the decision-makers' abilities and competence to make adequate decisions and judgements regarding the change.

> (13) Well, this too is something that I am fearful of, that they (decision-makers) just want the systems quickly to usage and that "Hey we have this new great work-thing, that we too are here keeping up with technology!". When *the organization* sometimes makes like a

> bit too quick, hurried decisions, like when they bought everyone a tablet when a few employees were pestering for them in the socials. So that maybe just so that it would be really like thought out like to what it is used and for what it is really needed for, instead of making these quick decisions and using money for something that is completely useless. (Participant 10)

In extract 13 Participant 10 indicates uncertainties in the necessity of the change, implying that the change would be carried out merely to keep up with the current technological advancements. They reflect on past experiences in the organization and indicate distrust towards the decision-makers in the organization, as previous experiences have made the participant less trusting and more skeptical about future changes. They feel like previous actions of decision-makers have resulted in unsuccessful changes and little to no actual benefits have been gained. Participant 5 portrays a similar skepticism towards AI adoption in extract 14.

(14) There has been these kinds of changes before that I've been thinking like what was the reason for it or like this didn't make anything easier. Or like making changes purely for the enjoyment of making them. But really it can't go like that, that the IT persons there are like "Yay, so excited!" that they are like balloons there filled with excitement and like "This is awesome!" but then forgetting the people that are actually using the systems. Like is it really that awesome for them and especially if they don't know how to use it properly. (Participant 5)

In the extract Participant 5 expresses uncertainties regarding changes in the organization in general, and as they feel like previous changes have lacked in their planning and execution. They describe that previous changes have turned out to be unbeneficial for the employees or the changes did not meet the expectations following their execution. Along with that, uncertainty regarding the need for changes is brought up, as the employee indicates distrust towards the decision-makers, as well as express worries about employee consideration in the planning and execution of the change. These factors together were concluded to indicate skepticism and a more negative outlook towards AI adoption.

Relating to the doubts concerning the benefits and usefulness of AI adoption, part of the employees expressed worries of customer acceptance of AI as part of the organization's processes and services. The employees were concerned about how customers would react to the usage of AI in the organization, and whether it would lower customer satisfaction or even end up with the organization losing customers. As employees were aware that the organization highly values quality customer service in their actions, the acceptance of their customers was considered to be important for the change success by the participants and therefore raised concerns on whether AI adoption would be beneficial for the organization from this perspective.

> (15) Especially as there is so much of that like resistive atmosphere against AI - I think that it's going to be something that some people will want to maybe know of. Like if I'm buying services from this company then is it really humans doing it or is it just some AI. And possibly it could guide decisions there at least partially. (Participant 6)

Participant 6 in extract 15 indicates that AI could affect consumer behavior and guide customer decisions, as they sense an existence of a "resistive atmosphere" among people, and the organization's customers. This creates uncertainties and worries in the participant's mind about the change's success and whether the change will be favorable for the organization. This was concluded to signal employee skepticism towards AI adoption.

5 Discussion

This research explored employee attitudes in AI adoption in the organizational context by examining the employees of a singular case organization. The research was conducted to amplify the understanding of the employee perspective of AI adoption, as this research was based on the assumption of employee attitudes contributing to the success of AI adoption in organizations (Lichtentaler, 2019). Exploring and interpreting employee perceptions, expectations, evaluations and anticipations and their meanings, four attitudinal concepts were formulated. The main attitudinal concepts gathered from the data included employee openness, commitment, cynicism and skepticism towards AI adoption.

Employee openness towards AI adoption was identified to include expressions of interest, curiosity, and eagerness towards AI adoption. It characterized a more positive and optimistic outlook towards AI adoption in the organization, as the employees expressed desire for changes and were eager to gain the benefits of AI adoption. Accordingly, Wanberg and Banas (2000) in their work conceptualize employee openness as change acceptance and a positive view of changes, that is promoted by the belief of change benefits and perceived self-efficacy among other variables. These findings are in line with previous research on technology acceptance by Davis (1989) and Venkatesh et al. (2003) that have recognized the usefulness and gained benefits of technology usage to impact user attitudes and further impact their acceptance and behaviors. Considering the specific attitude in more detail, Miller et al. (1994) connect the possible gained benefits to employee openness, supporting the findings of this research.

In the AI adoption context previous research by Huang and Gursoy (2024) also consider individuals' interest to explore and experiment with technology to positively influence employees' responses to AI adoption. According to them, these employees are keen to learn and find ways to develop their actions as they view the adoption of AI as a positive challenge, supporting the findings of this research. In similar fashion, Lichtentaler (2019) states that some individuals tend to be more technology driven and convenience

orientated, and this affinity towards new technologies promotes positive attitudes towards AI adoption.

It was identified from the data that the employees contemplated the effort required by them to adopt AI as part of their work. This research suggested that employees' confidence in their own and the organization's capabilities to successfully adopt AI and the adoption process requiring minimal effort was connected to the employees' eagerness to adopt AI and further to employee openness towards AI adoption. This finding is supported by the work of Davis (1989), as they recognize the ease of use as a factor influencing the acceptance of new technologies. In the AI adoption context, Chatterjee et al. (2021a, p. 10) consider compatibility, that refers to the perceived applicability between the introduced technology and the organization, current technology and processes, to influence perceived usefulness and further promote the adoption of AI. Accordingly, Cao et al. (2021) state that organizations should focus on providing adequate facilitating conditions, that refer to the enabling technologies and infrastructures inside the organization to improve attitudes and further foster acceptance and adoption of AI.

Employee commitment towards AI adoption was recognized in this research to be exhibited through employees' felt incentives and responsibilities to support and participate in AI adoption. The findings are in line with previous research regarding employee attitudes in changes. Herscovitch and Meyer (2002, p. 475) describe commitment to change as a mind-set that binds individuals to take on necessary actions supporting for the change. This definition of change commitment includes the behavioral component of the phenomena, that was also recognized in the conceptualization of commitment in this research as employees' readiness to actively participate in AI adoption. Accordingly, Fedor et al. (2006) note that commitment does not simply mean the absence of resistance, but rather the readiness and willingness to take action and make effort to support the change initiative. In line with this Proctor and Doukakis (2003) present the employees' will to co-operate and acceptance of responsibility for their own actions as

important factors contributing to change success in organizations, supporting the findings of this research.

The findings of this research show that commitment was experienced differently among employees. The findings are in line with the work of Herscovitch and Meyer (2002, p. 475), who state that commitment can reflect varying employee perceptions; desire for change based on anticipated benefits resulting from the change, perception of costs related to failure or resistance of the change and felt obligations to support the change. In addition, the data showed that employees evaluated the impact of AI adoption and made judgements about its necessity. In line with this, Parish et al. (2008, p. 35-36) state that the employees' perception of the change compatibility with the organization's strategic goals and vision enables employee commitment to change. The employees showed support for the change as they evaluated it to have a positive impact and considered the change necessary and reasonable. Accordingly, Ding (2021, p. 2961-2962) states that employees who view AI adoption as an opportunity providing them with possible benefits are more driven and willing to tolerate and overcome the changes.

The employees' willingness to develop their personal competence, alter behavior and participate in AI adoption can be understood as compliance, that Herscovitch and Meyer (2002, p. 475-476) identify as the prominent behavior of commitment and the opposite of resistance. This complying attitude was present in the data as the employees felt that they were obligated to follow orders and act accordingly. In accordance, previous research has recognized that the organizational environment and the quality of relationships inside the organization affect employee commitment, as they can influence employees' desire and duty to support the change (Parish et al., 2008, p. 45; Lichtentaler, 2019).

Lichtentaler (2019, p. 43) states that the social desirability to start using new technologies impacts employee attitudes regarding AI adoption. This study provides support for this as part of the employees considered it important to attain their competence and

identify as a good worker, indicating that there was a social pressure to adapt to the change inside the organization. Failure to do so can be considered as the perceived costs the employees connected to the change, following the antecedents of change commitment presented by Herscovitch and Meyer (2002).

Employee cynicism towards AI adoption was recognized in this research to be exhibited through fears, concerns, worries and threats that the employees connected to AI adoption in the organization. In line with previous research considering cynicism, it was identified to represent a more negative outlook towards the change (Dean et al., 1998; Andersson, 1996). Cynicism towards AI adoption showed as employees' negative anticipation of the change consequences and it centered around the perception of AI causing harm or disadvantage for employees.

Stanley et al. (2005, p. 435-436) in their definition of cynicism highlight the centrality of beliefs that actors lack integrity in their motives and actions, and therefore can't be trusted. The analysis identified that employees displayed distrust in decision-makers as the employees believed that the change was made on their expense, supporting the definition of cynicism provided by Stanley et al. (2005), Dean et al. (1998) and Andersson (1996). In addition, Dean et al. (1998) state that humans form attitudes as they gain experiences and evaluate the behaviors of other humans in the organization. This was found in the data as the employees were identified to express cynicism as they reflected on past experiences from change situations in the organization.

In addition to the identified distrust that formed from disbeliefs of change motives and objectives, varying concerns and worries relating to the impact of AI and anticipated outcomes were connected to cynicism in this research. The employees anticipated AI adoption to result in various unwanted changes to their work, supporting the work of Bankins et al. (2024b). Other concerns that the employees had addressing AI adoption included AIs possible negative influence on job-satisfaction and the meaningfulness of work, increases to performance or competence demands, and their work losing value

and eventually being replaced by the technology. Lichtenthaler (2019) in their work recognizes the ambiguity related to AI introduction in organizations. Ambiguity refers to the unclarities and complex nature of AI, that appears as concerns and uncertainties of the future for human employees relating to job-displacement and work revision. These concerns and uncertainties can then create negative attitudes towards AI among employees, and further negatively affect employee openness (Lichtenthaler, 2019). Accordingly, Bankins et al. (2024a, p. 167) and Cao et al. (2021) consider fears, perceived threats and personal concerns that AI poses for employees to promote negative attitudes among employees, that can result in increased resistance among employees and further influence AI adoption. Change management literature considers similar threats that changes impose for human employees. According to Moran and Brightman (2001) changes that threatens employees' work purpose (why people commit and show up to work), identity (sense of who they are) and mastery (sense of capability to manage themselves and work effectively), are likely to result in resistance among employees. Therefore, it is concluded that the concerns employees connected to AI adoption may affect the formation of more negative employee attitudes, that are identified as cynicism in this research and further contribute to employee resistance to AI adoption.

Expressed distrust in AI performance and its applicability to work were also identified to describe a more cynical outlook towards AI adoption in the data. Accordingly, Tong et al. (2021, p. 1625) in their research found that employees' negative perceptions about AIs trustworthiness and possible related risks harmed employee behavior and performance outcomes and further affect the gained business value of AI. In similar sense, Bankins et al. (2024b) found that the employees who perceived bad applicability and low quality of AI systems had trouble trusting its performance, and it negatively influenced the AI-employee collaboration. Glikson and Woolley (2020) also state that the success of AI adoption heavily dependent on employees' trust in the technology, as low trust in AI can lead to rejection of the technology.

Worries about individual abilities to accommodate the change were also raised among employees, that were connected to expressions of cynicism in the data. The work of Ding (2021) supports the findings of this research as they recognize that individuals evaluate the possible benefits and risks together with their capacities and resources when adopting the new advanced technologies. Park et al. (2024) considered a similar variable as they defined AI use anxiety in their research and perceive it as possibly creating negative emotional reactions to AI adoption. Lichtentaler (2019) and Davis (1989) recognize the anticipation of major effort related to AI usage may disseminate how useful the employees perceive AI and therefore create potentially negative attitudes among employees. This supports the finding that the anticipated challenges related to AI adoption are connected to expressions of cynicism.

Employee skepticism towards AI adoption was characterized as employees' uncertainties or negative expectations of the change success, that showed as cautiousness and reservations among the employees. Past experiences of changes in the organization and other uncertainties of the organization's capability to accommodate successful changes were brought up in the data and further identified to showcase employee skepticism. This research supports the definition of employee skepticism in the organizational change context created by Stanley et al. (2005). They define employee skepticism in organizational change context to comprise of doubts and uncertainties of change viability and success.

Similar to cynical attitudes, distrust was identified from the data in relation to skepticism, but it was expressed towards the organization's abilities to accommodate successful change, rather than the fairness of those actions. This is in line with previous research conducted by Stanley et al. (2005), who make the distinction between employees' belief of the integrity and viability of made decisions and actions. The employees reflected on past experiences of changes in the organization, and concerns were brought up considering the planning and execution of AI adoption. They expressed uncertainties whether the organization would provide enough resources and possess needed expertise to

successfully carry out the AI adoption process. Rafferty and Griffing (2006, p. 1155) address this by stating that the planning of change and the employee's perception of its extent and quality also affects employee attitudes towards it. According to them, if the employees perceive the planning as adequate and appropriate, they are likely to feel less uncertain. In similar fashion, Stanley et al. (2005) recognize that perceptions of management's competence and beliefs of their abilities to implement changes affect skepticism.

In addition to the experienced distrust in the organization's capabilities to accommodate AI, the employees questioned the necessity of AI adoption. They were uncertain of the change drivers and questioned whether it would bring any actual benefits to them, their work or to the organization. Providing support for this finding, Proctor and Doukakis (2003, p. 268) consider employee resistance to change form as employees' sense that the change is due to outside pressures.

Despite change management research recognition of change specific skepticism, few research concerning AI adoption recognizes a similar phenomenon (Chowdhury et al., 2024; Kolbjornsrud et al., 2017; Ding, 2021). Ding (2021) states that employees may sense distrust as they may not have adequate information about the change consequences and impacts and are uncertain of the resources and support they will receive facing the situation. These evaluations impact employees' attitudes and behaviours, that will further impact the adoption process and employee performance outcomes. Kolbjornsrud et al. (2017) considered skepticism in their work as the concern for possible negative consequences relating to AI adoption, the evaluation of AIs inadequateness to perform certain tasks or uncertainties of AI providing the anticipated benefits, supporting the findings of this research.

To conclude, four attitudinal concepts were identified from the data, that included employee openness, commitment, cynicism and skepticism towards AI adoption. Each of the attitudinal concepts captured varying employee perceptions, evaluations, expectations and anticipations regarding AI adoption in the organization. Contrasted with

change management research and AI specific studies, it is proposed that openness and commitment represent the more positive and desirable employee attitudes, that organizations should aim to foster and nurture (Lichtentaler, 2019; Miller et al., 1994; Herscovitch & Meyer, 2001; Fedor et al., 2006). In contrast, cynicism and skepticism represent the more negative attitudes that organizations should aim to alleviate and decrease among their employees, to successfully carry out AI adoption processes (Lichtentaler, 2019; Tong et al., 2021; Dean et al., 1998; Stanley et al., 2005). As these attitudes are affected by various individual, contextual and situational factors, such as national cultural differences (Kolbjornsrud et al., 2017), organizational culture, management styles and relationships inside the organization (Bankins et al., 2024a), individual appraisals of technology (Ding, 2021; Lichtentaler, 2019), experience and knowledge of AI (Chowdhury et al., 2022), employees' skill levels and the specific applications of AI (Holm & Lorenz, 2018), differences in the adoption and implementation processes are likely to occur between employees and organizations (Bankins et al., 2024a, p. 169; Meijer et al., 2021). This way there is no singular solution or strategy that can guarantee the successful adoption of such complex and unique technology as AI. However, the understanding and consideration of employee attitudes can aid organizations to successfully adopt AI technologies as part of their processes and operations (Lichtenthaler, 2019, p. 39). This research contributes to the knowledge of employee attitudes in AI adoption, increasing information and possibly aiding the AI adoption process in organizations.

5.1 Managerial and practical implications

This study provides several managerial implications for organizations planning to adopt AI. Firstly, it is notable that managers cannot and therefore shouldn't aim to control the attitudes expressed but rather focus on the factors influencing their formation (Oakland & Tanner, 2007, p. 17). As this research identified the attitudinal concepts it managed to showcase and conceptualize the varying perceptions, evaluations, expectations, and judgements that the employees had addressing AI adoption. This provided insights for

organizations to better understand the employees' view of AI adoption and comprehend the underlying factors possibly influencing their attempts to adopt AI.

The analysis brought up several reoccurring matters connected to AI adoption from the data, that included the impact of AI adoption on employees, the trustworthiness of the organization's actions and its capabilities, anticipated effort of adaptation and the impact and benefits of AI. As the data showed, varying concerns and threats were displayed regarding changes to work tasks, employee value and job displacement. Identifying and addressing these concerns is considered important for successful AI adoption, as they can have a significant negative impact on employee attitudes and behavioral intentions (Bankins et al., 2024a; Cao et al., 2021). Open communication and transparency of actions and promotion of employees' sense of job-security and status could alleviate the concerns and increase employees' trust in the fairness of the organization's actions and further foster the adoption of AI (Tong et al., 2021; Bankins et al., 2024a).

It was discovered that the anticipated effort of AI adoption was considered by the employees from two perspectives, their own abilities and the organization's capabilities and resources. Considering the worries of personal and organizational capabilities to accommodate AI, empowering, training and providing support for the employees could aid the AI adoption process (Bankins et al., 2024a; Cramarenco et al., 2023; Cao et al., 2021; Chatterjee et al., 2021). Previous research in the field of change management has also revealed that involving people in the change has a positive impact on their attitude towards it, that further impacts change success (Al-Haddad & Kotnour, 2015). Involving employees from the beginning of the change process acts in favor of change success, as higher involvement lowers resistance to technological changes (Berlak et al., 2021, p. 343).

Employee evaluations of the necessity, impact and benefits of AI adoption were connected to the expression of both positive and negative attitudes in this research. Part of the employees believed that they would gain benefits resulting from AI adoption and

perceived the adoption of AI as more necessary for the organization. Others viewed AI as less useful and benefitting as they viewed the technology as less applicable to their work. These differences indicate the need for better employee understanding of AI and its potential applications and benefits. This can be achieved by increasing the employee awareness of AI and providing them with information through knowledge sharing and training of employees (Cao et al., 2021; Chowdhury et al., 2022). Innovative and supportive organizational culture and climate that facilitates employees' behavioral intent to use AI could also support this (Bankins et al., 2024a, p. 164).

To conclude, organizations should aim to promote and support positive attitudinal concepts, openness and commitment and alleviate the negatives, cynicism and skepticism when adopting AI as part of their actions and processes. Active identification, consideration and managing of the attitudes and the contributing factors of them can help organizations to successfully adopt AI and gain the benefits of its usage (Lichtentaler, 2019; Chowdhury et al., 2022).

5.2 Limitations and future research agenda

The main limitations of this study are connected to the utilization of qualitative methods in the data gathering and analysis of the research. Utilizing qualitative methods in the data gathering and analysis of the research enabled a comprehensive exploration of the employees' perceptions and reactions to AI adoption. 14 employees took part in the research interviews and as a result a rich data set was gathered that provided deep and meaningful information about the employees' views and perceptions regarding the research topic. However, the gathered data represented a relatively small portion of the organization's personnel, even though the gathered data set was rich in its content. In addition, the research included participants from a singular organization, and therefore the findings are limited to representing a single organization and its employees. A larger sample of the subjects and interviews conducted as well as multiple organizations investigated could have enabled a more comprehensive exploration of the employee attitudes

in AI adoption in the organizational context. The data set was also off-balance as majority of the participants represented the female gender. A more balanced gender distribution between the participants proposes a future research agenda.

When qualitative methods are utilized, challenges with reliability and validity arise (Hirsjärvi & Hurme, 2022). Reliability and validity are based on quantitative research, and instead the focus of the quality and credibility of qualitative research is in the trustworthiness of the research (Hirsjärvi & Hurme, 2022). To increase the trustworthiness of the result generated, thematic analysis methods were utilized as they provided an adequate methodological premise to conduct a comprehensive and systematic analysis of the data (Braun & Clarke, 2006; Gioia et al., 2012). To show the premises of the made conclusions and provided results, the research included the thematic structure created as part of the analysis and extracts from the data (Ruusuvuori et al., 2010; Braun & Clarke, 2012; Gioia et al., 2012). It is also important to note the analysis included the transcription of speech data that is in itself an interpretation of the data and therefore it contributes to the actual analysis (Jolanki & Karhunen, 2010). This research acknowledges that even the most precisely executed transcriptions leave details out of the analysis, and therefore they do not represent the original data with complete accuracy (Jolanki & Karhunen, 2010; Hirsjärvi & Hurme, 2022).

It is notable to recognize the contribution of the researcher in qualitative research (Gunther & Hasanen, 2021 ; Juhila, 2021). The interviewer contributes to the interviews, as it is a social interaction between two or more people, and cultural and other social norms, roles and structures play into it (Hirsjärvi & Hurme, 2022). The researcher themselves conducted the interviews. This enabled a close interpretation of the data, that is necessary in qualitative research (Juhila, 2021 ; Gioia et al., 2021). However, the researcher was themselves part of the organization, and their position inside the organization as well as their experiences and biases may have interpreted and influenced the data gathering and the following analysis of the research despite the intention of carrying out an unbiased analysis leaving out any personal opinions or expectations (Juhila, 2021). In

addition, when utilizing thematic analysis methods, the researcher takes on a more active role, as they are responsible for the interpretation and formulation of the categories and themes and make judgements and decisions about what is important to include in the report from their own perspective (Gioia et al., 2012; Braun & Clarke, 2006; Gunther & Hasanen, 2021). This research acknowledges that the decisions and judgements together with individual theoretical positioning and chosen research viewpoint impact the results of the analysis (Ruusuvuori et al., 2010; Gioia et al., 2012; Braun & Clarke, 2006).

It is important to point out that the research did not aim to generate generalizable results but rather provide implications and insights into the topic in the chosen research context (Yin, 2009; Juhila, 2021; Gioia et al., 2012; Braun & Clarke, 2006). As the research managed to conceptualize four attitudinal concepts it could not accurately predict their contributions to either acceptance or rejection of AI in organizations, as no causal relationships could be explored utilizing the chosen research methods (Juhila, 2021; Saaranen-Kauppinen & Puusniekka, 2006). Future research utilizing quantitative methods could investigate the relationships between the attitudes and the outcomes of AI adoption with more accuracy. Previous research has also shown that variables such as gender and age as well as organizational culture and employee tenure in the organization may impact the adoption process (Venkatesh et al., 2003; Huang & Gursoy, 2024; Meijer et al., 2021; Bonetti et al., 2023). The impact between these variables and the attitudes were not explored, and future research could investigate the connections between them and the specific attitudinal concepts. The exploration of the connections and intertwines of the specific attitudes could also propose a future research agenda.

5.3 Conclusions

This research managed to conceptualize four attitudinal concepts connected to AI adoption in the organizational context when examining the employees of a single retail organization operating in Finland. The attitudinal concepts were identified to represent employee openness, commitment, cynicism and skepticism towards AI adoption, and

they were formed based on the exploration and interpretation of employee perceptions, evaluations, expectations, and judgements. The findings succeed to provide more information and insights into the employee perspective of AI adoption by examining the characteristics and specifications of the attitudes and going further in their exploration of their nature.

6 References

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