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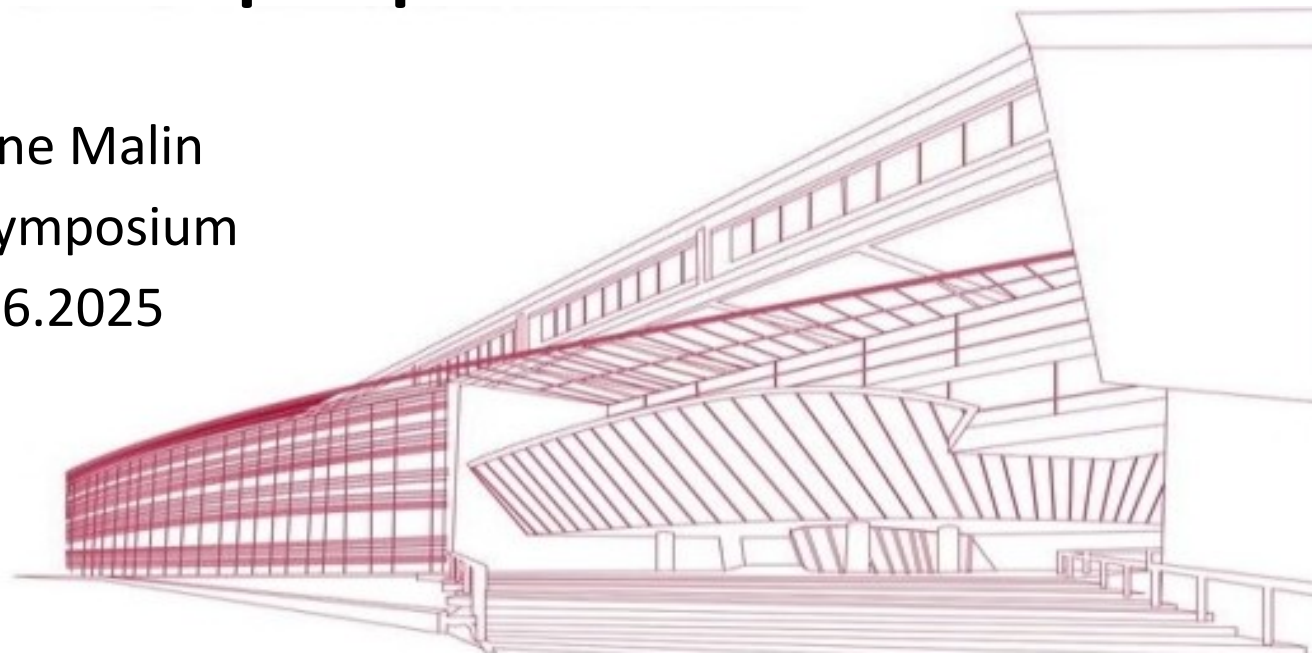
Artificial intelligence in human resource management.

A multiple stakeholder perspective

Christine Malin

HFDT-Symposium

24.06.2025



Agenda

- Motivation and Problem Setting
- General Approach
  - Research question and working questions
  - Research papers overview
- Discussion of the contribution of the thesis

Motivation and Problem Setting

Motivation and Problem Setting

- Artificial intelligence (AI) is an emerging technology expected to transform **human resource management** (HRM) (Nawaz et al., 2024).
- AI is able to **learn** from a given data set, **identify patterns** and make predictions based on this data, and automatically **adapt** these predictions through experiences (Huang and Rust, 2018).
- AI can **take over** almost all **HRM tasks**, including e.g., automated resume screening (Gupta, 2024).
- Organizations generate **cost savings** (Black and van Esch, 2020), HR employees benefit from **work support** and **time savings** (Hossin et al., 2021), and job applicants have a better **candidate experience** (Alrakhawi et al., 2024).

Motivation and Problem Setting

- Despite the high **potential** of AI in HRM, its adoption often **faces** organizations with several **barriers**.
- When adapting AI in HRM, organizations can be confronted with **technical barriers** such as the lack of HR data sets (Soleimani et al., 2022), **organizational barriers** such aversion towards AI (Park et al., 2021) and **legal and ethical barriers** such as discrimination risks (Rane et al., 2024).
- These barriers can affect the acceptance of AI, as the adoption of AI depends on how key stakeholders of HRM perceive the technology and are willing to use it.
- Therefore, the **acceptance of AI by HRM key stakeholders** is a **crucial factor** for the **adoption of AI** in HRM (Del Giudice et al., 2023).

Motivation and Problem Setting

- Acceptance is a prerequisite for achieving the adoption of AI and thus realizing its potential (Laurim et al., 2021).
- HR professionals are **skeptical** about AI use, while job applicants tend to **prefer human** recruiters over AI (e.g., Tian et al., 2023).
- AI adoption barriers based on low AI acceptance are widely discussed, but **no appropriate measures** to foster it are provided to date (Fleiß et al., 2023).
- Low AI acceptance **hinders** adoption, **wasting its potential** for more efficient HR processes, data-driven and objective HR decisions, personalized employee support, better candidate experience and stronger employee retention (Yanamala, 2023).
- It risks falling behind in talent competition and modern working methods (Rane et al., 2024).

Motivation and Problem Setting

- A promising approach is to analyze it through the theoretical lens of **technology acceptance** (Samaradiwakara and Gunawardena, 2014).
- Technology acceptance is a theoretical construct that explains **how and why users accept** and **use a technology** (e.g., Momani and Jamous, 2017; Taherdoost, 2018; Louho and Oittinen, 2006).
- It is underpinned by several theories and models that can be used to analyze the acceptance of AI (Momani and Jamous, 2017)
  - Technology acceptance model (TAM)
  - Unified theory of acceptance and use of technology (UTAUT)

Motivation and Problem Setting

- Theoretical acceptance models are based on different theories but are **characterized** by **similar components** (Alshammari and Rosli, 2020; Momani and Jamous, 2017).
- The commonalities between theoretical acceptance models can be attributed to the fact that technology acceptance can be divided into **key components**, with each theory/model placing different focuses on these components:

Barriers

hinder the use of the technology and affect adoption/utilisation

Influencing factors

influence use (enabling vs. inhibiting factors)

Actual use

illustrates how AI is used in practice despite the existing barriers and influences.

Beliefs

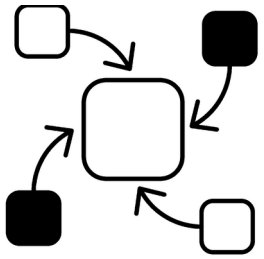
influence how people perceive AI, causing barriers to be built up or broken down, influencing factors to be promoted inhibited, & determine whether it is used

Motivation and Problem Setting

- Theoretical models explaining acceptance and previous research findings are only **applicable** to the specific context of **AI in HRM** to a **limited extent**:
  - They were originally **designed for conventional (deterministic) information technologies**, which is why they only consider the specific features of AI to a limited extent (Kelly et al., 2023).
  - They are aimed at domain **independent analyses** (Samaradiwakara and Gunawardena, 2014), so that factors for the (low) acceptance in HRM have hardly been studied to date (Laurim et al., 2021).
- The **special characteristics of HRM** such as its human-centered nature, ethical and legal aspects, and need for transparency complicate AI adoption and **limit the applicability** of general theoretical acceptance models.
- To realize the full potential of AI for HRM, we need to understand the underlying mechanism of AI acceptance and thus the adoption of AI in HRM (Laurim et al., 2021; Rane et al., 2024).

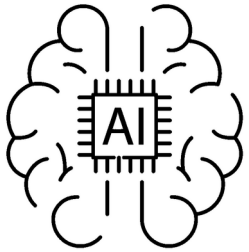
Motivation and Problem Setting

This dissertation examines and identifies:



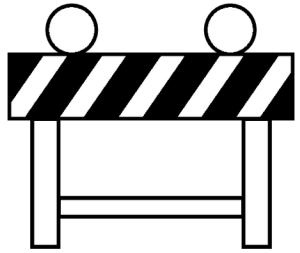
Factors

which **factors influence** the acceptance of AI in HRM.



Beliefs

the **extent** to which **beliefs influence** the acceptance of AI, create barriers and which factors shape this dynamic



Barriers

barriers that arise when using AI in HRM and how these can be **mitigated**

Motivation and Problem Setting

Findings on the four core components of technology acceptance – **barriers**, **influencing factors**, **actual use** and **beliefs** about AI – were derived from

Interview study

Experiment

Vignette-style survey method

Systematic literature review

Focus group workshops

General Approach

Research question and working questions – Research papers overview

Research question and working questions

Which factors influence the acceptance of AI in HRM?

P1	**WQ1:** How do HR professionals' beliefs influence potential use cases and barriers of AI in candidate pre-selection?
P2	**WQ2:** How does decision-makers' information search behaviour influence the selection quality when using AI in personnel selection?
P3	**WQ3:** How do job applicants perceive the fairness of an AI-based personnel selection process considering explanations, compared to personnel selection performed by humans?
P4	**WQ4:** Which approaches exist for auditing HRM-specific AI systems and how they address aspects of AI regulations?
P5	**WQ5:** Which requirements do workers' representatives pose for the use of AI in HRM, and which measures can be used to fulfil them?

General approach

Research Papers Overview

	P1-In the AI of the Beholder	P2-The application of AI in digital HRM	P3- Rejected by an AI?	P4-A systematic literature review of auditing AI in HRM	P5-Stakeholder-specific adoption of AI in HRM.
Object of investigation	explanation for the discrepancy between the potential of AI and its low adoption in recruiting	decision-makers' information search behavior when using AI in personnel selection and its impact on selection quality	job applicants' fairness perception of AI based personnel selection considering explanations	overview of existing HRM-specific AI audit approaches, considering AI regulations	requirements for adopting AI in HRM
Method	interview	experiment	vignette-style survey method combined with an experimental design	systematic literature review	focus group workshop
Theory used	theory of planned behavior (belief) & algorithm aversion	status quo bias & information search behavior & decision-making theory	organizational justice theory & algorithm aversion	audit theory	stakeholder-oriented approach
Sample	25 HR professionals	93 HR decision-makers	921 job applicants	-	12 workers' representatives
Results	HR professionals' beliefs about the perceived technical capabilities of AI determine the use cases that HR professionals imagine, while their beliefs about the perceived effort to enable an AI to take on a task determine the perceived barriers. HR professionals' beliefs are based on vague knowledge about AI, leading to non-adoption.	HR decision-makers' tend to adopt status quo bias when using AI. They adopt one of three information search strategies that have different effects on selection quality.	Explanations have a positive impact on job applicants' fairness perceptions, both when the personnel selection decision was made by an AI or a human recruiter	The literature focuses on three dimensions: HRM-specific AI audit frameworks, evaluation of auditing options already applied, and development directions of AI audit research. The literature examine various aspects of auditing primarily focusing on fairness of AI in selection. Individual aspects of regulation are addressed to varying degrees in research on auditing AI.	stakeholder-tailored catalog for adopting AI in HRM, including core requirements and the most promising measures to fulfill them

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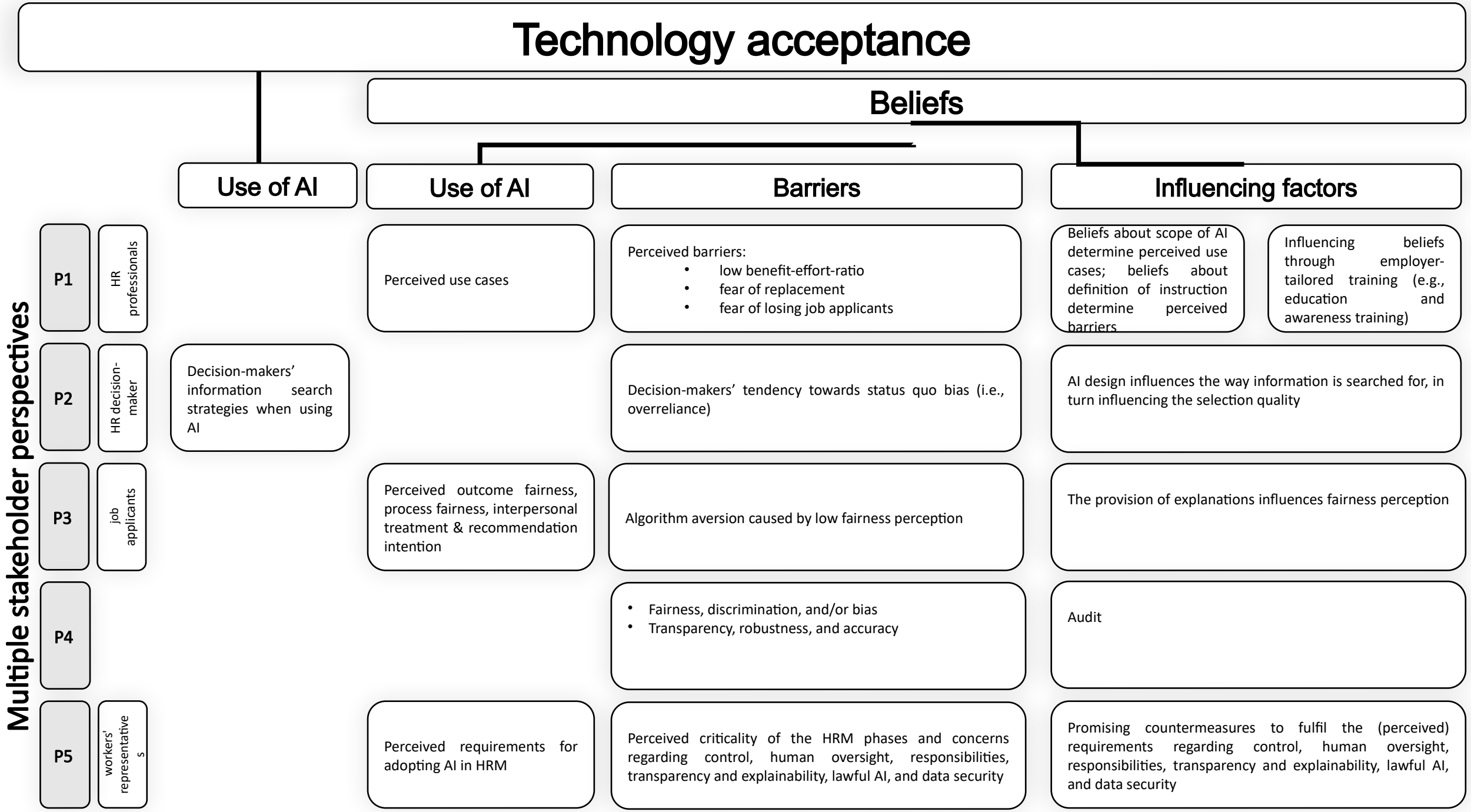
ID	Year	Authors	Title	Journal	(Publication) Status	VHB4	IF
P1	2023	Malin, C., Kupfer, C., Fleiß, J., Kubicek, B. & Thalmann, S.,	In the AI of the Beholder—A Qualitative Study of HR Professionals' Beliefs about AI-Based Chatbots and Decision Support in Candidate Pre-Selection	Administrative Sciences	published	-	3.0
P2	2024	Malin, C., Fleiß, J., Seeber, I., Kubicek, B., Kupfer, C. & Thalmann, S.	The application of AI in digital HRM – an experiment on human decision-making in personnel selection.	Business Process Management Journal	published	C	4.5
P3	2025	Malin, C. , Fleiß, J., Ortlieb, R. & Thalmann, S.	Rejected by an AI? Comparing job applicants' fairness perceptions of artificial intelligence and humans in personnel selection	Frontiers in Artificial Intelligence	completed and will be submitted soon	C	3.0
P4	2024	Malin, C., Fleiß, J., Fuchs, C., Reichel, A. & Thalmann, S.	A systematic literature review of auditing AI in HRM in the light of (upcoming) AI regulations	Journal of Responsible Technology	submitted and in the second revision stage	-	3.6
P5	2025	Malin, C., Fleiß, J. & Thalmann, S.	Stakeholder-specific adoption of AI in HRM: workers' representatives' perspective on concerns, requirements, and measures	Frontiers in Artificial Intelligence	published	C	3.0

Discussion of the contribution of the thesis


Technology acceptance
Beliefs
Use of AI
Use of AI
Barriers
Influencing factors
Multiple stakeholder perspectives
P1
HR professionals
Perceived use cases
Perceived barriers:
low benefit-effort-ratio
fear of replacement
fear of losing job applicants
Beliefs about scope of AI determine perceived use cases; beliefs about definition of instruction determine perceived barriers
Influencing beliefs through employer-tailored training (e.g., education and awareness training)
P2
HR decision-maker
Decision-makers' information search strategies when using AI
Decision-makers' tendency towards status quo bias (i.e., overreliance)
AI design influences the way information is searched for, in turn influencing the selection quality
P3
job applicants
Perceived outcome fairness, process fairness, interpersonal treatment & recommendation intention
Algorithm aversion caused by low fairness perception
The provision of explanations influences fairness perception
P4
Fairness, discrimination, and/or bias
Transparency, robustness, and accuracy
Audit
P5
workers' representatives
Perceived requirements for adopting AI in HRM
Perceived criticality of the HRM phases and concerns regarding control, human oversight, responsibilities, transparency and explainability, lawful AI, and data security
Promising countermeasures to fulfil the (perceived) requirements regarding control, human oversight, responsibilities, transparency and explainability, lawful AI, and data security

Discussion of the contribution of the thesis

This work shows that **beliefs** about AI have an **influence** on the main **components of technology acceptance**.

Beliefs

This work indicates that various **barriers** to AI in HRM are **perceived** and **occur**.

Barriers

This work provides an **overview** of possible **factors influencing** the acceptance of AI in HRM and their effects.

Influencing factors

This work provides insights into how the use of **AI** is **perceived** and how AI is **used** in HRM.

Use of AI

Discussion of the contribution of the thesis

The framework developed helps to understand the action when AI is used in HRM and the mechanisms that control the action:

- An understanding can be gained of the extent to which **beliefs influence the acceptance of AI**, create barriers and which factors shape these dynamics.
- It offers insights into which **influencing factors** of AI and **barriers exist** in relation to the acceptance of AI in HRM.
- **Recommendations** for measures tailored to HRM key stakeholders to **mitigate** the **barriers** are a component of the framework.
- By highlighting factors that influence the acceptance of AI in HRM, the framework was able to demonstrate the **extent** to which these are **considered** in **traditional acceptance factors** and by which AI-relevant factors these should **be expanded**.

Thank you!