
Reconceptualizing Shadow IT in the Age of Artificial Intelligence: A Systematic Literature Review and Framework for Motivational Factors in the Adoption of Artifical Intelligence

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Exposé

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List of Abbreviations

AI Artificial Intelligence

IS Information System

IT Information Technology

SAI Shadow AI

SIT Shadow IT

SLR Systematic Literature Review

1 Research Topic

The term Shadow IT (SIT) refers to the unauthorized use of hardware, software or cloud services within an organization without review and approval, potentially causing security risks, compliance issues or even data breaches (Rakovic et al., 2020, p. 145). With the rise of generative Artificial Intelligence (AI) technologies and other AI-supported tools, a new category of SIT has emerged: Shadow AI (SAI). This term describes the use of AI applications by employees without formal approval or oversight by the company or organization (Silic et al., 2025, pp. 1–2). SAI can be substantially more dangerous for organizations than traditional SIT. First, employees may enter confidential or sensitive data (e.g. customer data, contracts, source code) into external AI applications, creating immediate privacy, security and compliance risks. Second, generative systems can produce plausible but incorrect outputs, which may lead to flawed decisions in analysis, reporting or customer communication. Third, SAI can scale risky behavior quickly, because generated content and recommendations can be reused across many tasks and teams within a very short time. Thus, the key difference is that SAI does not only introduce unapproved tools, but also uncontrolled machine-generated content and decision support at scale.

2 Motivation

The motivation for this thesis arises from the increasing prevalence of generative AI technologies in the workplace and the potential risks associated with their unauthorized use. While there is a growing body of research on SIT, there is a lack of comprehensive understanding of SAI and its implications for organizations (Silic et al., 2025, p. 5). This thesis aims to fill this gap by conducting a systematic literature review to identify and analyze existing research on SAI, and by developing a conceptual framework that extends the traditional understanding of SIT to encompass the unique characteristics and implications of SAI.

Main Research Question (RQ): How does SAI differ from traditional SIT in organizations with regard to motivational factors, consequences, and countermeasures?

To structure this question, the thesis addresses the following sub-questions:

1. Which motivational factors known from SIT are transferable to SAI, and which additional motivation factors are specific to SAI?
2. Which organizational consequences of SAI differ from those of SIT?
3. Which countermeasures are discussed for SIT and SAI, and how do they differ in design and expected effectiveness?

Based on these questions, the thesis aims to develop a structured comparison of SIT and SAI and derives an extended conceptual framework.

4 Preliminary Outline

3 Methodology

The research will follow a Systematic Literature Review (SLR) according to Okoli (2015). This method is used to identify, evaluate and interpret the available research relevant to a particular research question, topic area or domain of interest and is designed to be used in Information Systems (ISs) research (Okoli, 2015, p. 884).

A SLR is particularly suitable for this thesis as it allows to systematically gather and analyze existing knowledge on the topic of unauthorized use of Information Technology (IT) tools and AI. With this approach, it is possible to identify research gaps and provide a solid foundation for future research directions.

Even though the methodology is designed mostly for research teams, but with some minor adjustments, it can also be used for individual research. Overall it simplifies the process of conducting a literature review due to the lack of risks associated with incorrect team communication and cooperation.

4 Preliminary Outline

Lastly the following outline should give an overview of the planned sections of the thesis. Changes may appear during the research process but as an entry point it should help to structure the work.

1. Introduction
2. Theoretical Foundations
 - 2.1. Shadow IT
 - 2.2. Motivational Theories
 - 2.3. From Shadow IT to Shadow AI
3. Methodology
4. Structured Literature Review Results
 - 4.1. Overview of Identified Literature
 - 4.2. Shadow IT Baseline
 - 4.3. Shadow AI in Existing Literature
5. Conceptual Development: Extending Shadow IT to Shadow AI
 - 5.1. Transferable Motivations
 - 5.2. Novel Motivational Dimensions
 - 5.3. Behavioural Shift in Knowledge Work
 - 5.4. Integrated Conceptual Framework
6. Comparative Analysis: Shadow IT vs. Shadow AI
7. Discussion
8. Limitations and Future Research Directions
9. Conclusion

With this outline, the thesis will first establish a theoretical foundation by discussing

4 Preliminary Outline

the concepts of SIT and motivational theories. Then, it will present the methodology of the systematic literature review and its results. Based on these results, the thesis will develop a conceptual framework that extends the traditional understanding of SIT to encompass the unique characteristics and implications of SAI. Finally, a comparative analysis will be conducted to highlight the differences and similarities between SIT and SAI, followed by a discussion of the findings, limitations, and future research directions.

References

- Okoli, C. (2015). A guide to conducting a standalone systematic literature review. *Communications of the Association for Information Systems*, 37, 879–910.
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Eidesstattliche Erklärung

Hiermit versichere ich, die vorliegende Arbeit selbstständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt sowie die Zitate deutlich kenntlich gemacht zu haben.

Ich erkläre weiterhin, dass die vorliegende Arbeit in gleicher oder ähnlicher Form noch nicht im Rahmen eines anderen Prüfungsverfahrens eingereicht wurde.

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