

**LEADERSHIP READINESS AS A PREDICTOR OF AI ADOPTION SUCCESS IN SMALL
BUSINESSES**

by

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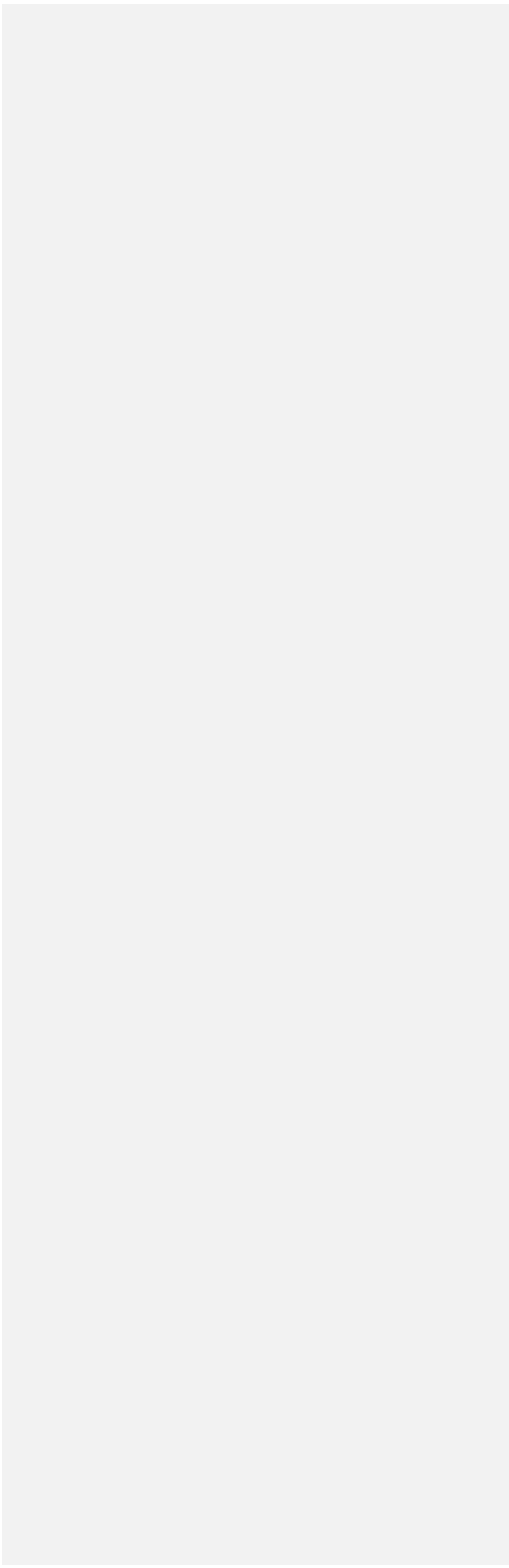
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Abstract



Dedication

Acknowledgments

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SECTION 1. PROJECT DESCRIPTION

Overview of the Project

While AI is revolutionizing modern-day business, small businesses are still faring way behind big businesses with regard to AI technologies. As per the latest reports, just 22-25% of small businesses are utilizing AI today, whereas more than 70% of large businesses (McKinsey & Company, 2025) are avidly using it. The main challenges faced by small companies when implementing AI are limited resources, lack of knowledge of AI, and uncertainty of leadership (Andersson et al., 2024). In a rapidly evolving digital landscape, the strategic adoption of AI is becoming essential for maintaining competitiveness, efficiency, and innovation within organizations. As AI evolves and continues to impact industries, those that fail to strategically leverage AI can suffer from a loss of competitiveness, inefficiency, and missed opportunities for innovation.

Knowledge and confidence, strategic awareness, and willingness to lead technological change are key success factors in implementing AI, particularly for leaders (Zoppelletto et al., 2026). Small business leaders usually have to make several decisions about technology and do so without proper training or proper digital transformation planning. In a small business, if getting ready for leadership is strongly correlated with the success of AI adoption, then focused leadership development could be a way to close the AI capability gap.

In this project, the impacts of leadership readiness on the success of AI adoption in U.S. small businesses will be analyzed using a quantitative regression technique. The study aims to offer evidence-based perspectives, which will bring benefits to small business leaders when they want to improve the capability of strategic innovation. The results can be applied to training, consulting, and leadership readiness programs for practitioners to enhance the use of AI in small organizations. This project aims to investigate whether leadership readiness can be used to predict what factors contribute to the success of the adoption of AI in small businesses.

Problem Statement and Purpose

Problem Statement

Artificial intelligence (AI) is becoming increasingly crucial for organizations in the U.S. business landscape. However, many of them are not well-prepared with the necessary leadership to effectively implement AI, which is leading to a decline in competitiveness, operational inefficiencies, and missing out on innovation opportunities (Razzouki et al., 2025). The McKinsey & Company report on enterprise AI adoption reveals that more than 70% of companies are facing challenges with AI adoption because of their lack of digital skills and preparedness of their leadership (McKinsey & Company, 2025). Also, 65% of companies state that their AI projects have been delayed or even aborted because leaders can't integrate AI into the organization's strategy (Deloitte, 2023). Such challenges bring a great deal of trouble to business practitioners, such as increased operational costs, deceleration of innovation, and decline of competitive position in the fast-changing digital markets. The subproblem of insufficient leadership preparedness for AI-driven transformation in the industry (PwC, 2024) is that it is not known if leadership readiness can predict AI adoption success among US small business leaders in particular. This is because numerous small leaders aren't ready to lead AI initiatives and don't possess the required implementation skills. A recent study by PwC indicates that 48% of small enterprises trying to implement AI into their businesses are not seeing the returns they had hoped for because of a lack of leadership capabilities and/or the lack of a clear implementation strategy. There is a need to identify if leadership readiness is an important predictor of the success of implementing AI in small businesses.

That's a problem that is expressed in several negative operational and strategic consequences of small businesses: The reality of AI in small businesses is stark: AI projects are stuck, staff are hesitant to embrace AI, and AI tools are not aligned with business goals. However, many small business leaders do not have the necessary expertise and knowledge to lead the AI journey effectively, which leads to several real-world challenges in the adoption of AI in small businesses, including stalled projects, employee resistance, and the disconnect between AI tools and business goals. A recent report indicates that 41% of small businesses find themselves either having to pause or stop their AI programs due to a lack of strategic direction and change-management skills from their leaders' perspective to enable

digital transformation (Deloitte, 2023). Moreover, organizations that are not AI-ready are 32% less productive and about 2% less innovative than their AI-ready counterparts (Weiyu et al., 2025). This means that small businesses run the risk of real financial losses, lost market opportunities and diminished competitive strengths due to the leadership-readiness gap.

Alignment with the Program

This project is a part of the Doctorate in Business Administration (DBA) program in Strategy and Innovation at Capella University. This project is part of the specialization, which explores the role of leadership readiness in the outcomes of strategic innovation in small enterprises. Adopting AI can be a major point of organizational innovation and competitive strategy. This project explores the potential role of leadership readiness to drive success in the use of AI, and offers insights for practitioners on the ways that leaders can create innovation, manage technological change, and ensure their organizations are competitive long-term. Therefore, the study directly addresses the emphasis areas of this Strategy and Innovation: digital transformation, leadership effectiveness, and evidence-based decision making.

Purpose Statement

This quantitative regression project aims to explore the role of leadership readiness in the success of small business leaders in adopting AI in the United States. The independent variable is Leadership Readiness, which will be measured by the validated Technology Readiness Index 2.0 (TRI 2.0) that evaluates an individual's degree of readiness and confidence for new technology adoption (Parasuraman & Colby, 2015). The variable includes leadership attitudes, talents, and disposition to adopt AI, which are important components in determining the results of AI adoption. The dependent variable will be AI adoption success, which will be assessed through the validated Likert-scale instrument AI adoption success scale (AASS) (Razzouki et al., 2025) that evaluates perceived effectiveness of the implementation, perceived success of the performance, and the impact of the AI system on the organization. The variable depends on the extent to which the adoption is implemented in the organization, as well as the efficiency and competitive advantage achieved from it. The research

aims to explore the extent and nature of the relationship between readiness and the effective implementation of AI in Small Scale Business Entities, taking into account the variables. A series of anonymous surveys will be administered to small business owners in each U.S. Census region to find out if there is a significant relationship between leadership readiness and the success of adopting AI.

Gap in Practice

On the contrary, the gap in practice is that small business leaders are not engaging in leadership readiness assessments to help them understand if they have strategic and technological resources with which to successfully adopt AI (PwC, 2024). These assessments are not practiced, leading many leaders to start AI initiatives without knowing the level of readiness, leading to stalled initiatives, misaligned investments, and reduced performance. The study also revealed that, in the real world, small companies are more likely to use AI in a reactive than a strategic manner, often due to the lack of formal processes for assessing readiness and informing the decision-making process for AI adoption (Deloitte, 2023). This project can contribute to bridging this gap in practice by testing to see if leadership readiness is a predictor of AI adoption success and how readiness can be evaluated to inform the training, resource allocation and implementation planning of practitioners.

Existing State

The current situation reveals that a lot of small business leaders are not prepared to navigate the process of AI adoption as they are lacking in knowledge, preparedness, and strategic skills. Recent studies show that there is a lack of understanding of AI applications, implementation considerations, and impacts on organisations among current leaders in small businesses, which results in uncertainty and hesitation about decisions to implement AI (PwC, 2024). AI leaders are often missing systematic methods to assess AI solutions, to ensure employees are equipped to embrace the future of AI, and to connect with a business's primary goals (Deloitte, 2023). This leads to a fragmented, uncoordinated, and overly dependent approach to the adoption of AI, where leaders who lack confidence and experience in the digital world are more likely not to adopt the technology. This results in a disjointed, uncoordinated, and highly dependent usage of AI, with leaders who feel they don't have confidence or

experience in digital technologies being less likely to embrace the technology. The lack of readiness is evident in the number of projects left uncompleted, investments misaligned, and the decreased number of opportunities to leverage AI to boost productivity and innovation within the small business community.

Desired State

The ideal situation is that business leaders of small companies will be prepared to make strategic decisions on the use of AI, be tech-savvy, and have the ability to manage change. Leaders would be aware of how to assess the potential of AI, distribute resources effectively, share why AI implementation is strategic, and work with staff to implement AI. The findings indicate that the successful implementation of AI within an organization is significantly influenced by the leadership's preparedness, which leads to smoother AI integration, increased productivity, and more sustainable digital transformation results (Weiyu et al., 2025). This would empower small businesses to boost their innovation potential, optimize operations, make informed decisions based on data, and ultimately drive their competitiveness in the competitive landscape. While this project does not set out to solve the problem, identifying whether leadership readiness is a predictor of AI adoption success could aid practitioners in their ability to correctly target leadership development, training, and organizational support measures to get small enterprises closer to the desired state.

Theoretical Framework

Purpose of a Theoretical Framework

The purpose of a Theoretical Framework is to provide a theoretical basis for the research.

The theoretical framework is the lens through which a research problem is analyzed by outlining important concepts and relationships that should be included in the selection of variables, data collection, and data processing. The theoretical framework in quantitative research is important as it helps to avoid the selection of variables based on their randomness alone and is based on accepted theories and previous empirical studies. This project is based on the widely used technology organization environment (TOE) framework in strategy and innovation literature, which is used to understand the factors affecting the adoption and implementation of technological innovations. The TOE is an appropriate approach to the study of the use of artificial intelligence (AI) in small businesses because it takes into consideration factors such as internal organizational readiness, leadership capacity to drive innovation, and context that can affect the results of innovation.

Introduction to the TOE Framework

The applied framework used in the present project is that of Tornatzky and Fleischer (1995), which is called the TOE framework. The TOE framework suggests that the connection between the technological, organizational, and environmental contexts has an impact on technology adoption. The context of these will influence the perceived feasibility, value, and strategic fit of emerging technologies. The TOE has been widely used to study the decision-making process of adopting technologies such as AI, cloud services, automation, and analytics, particularly in organizations like small and medium-sized enterprises (SMEs), where it provides insights into organizational, technological, and environmental factors (Sánchez et al., 2025). TOE offers a solid theoretical framework for exploring the link between leadership readiness and the successful implementation of AI in small businesses in the U.S. The theoretical support of TOE serves as a solid basis for examining this study and understanding whether leadership readiness would predict the successful adoption of AI in small businesses in the United States.

Origin of the Framework

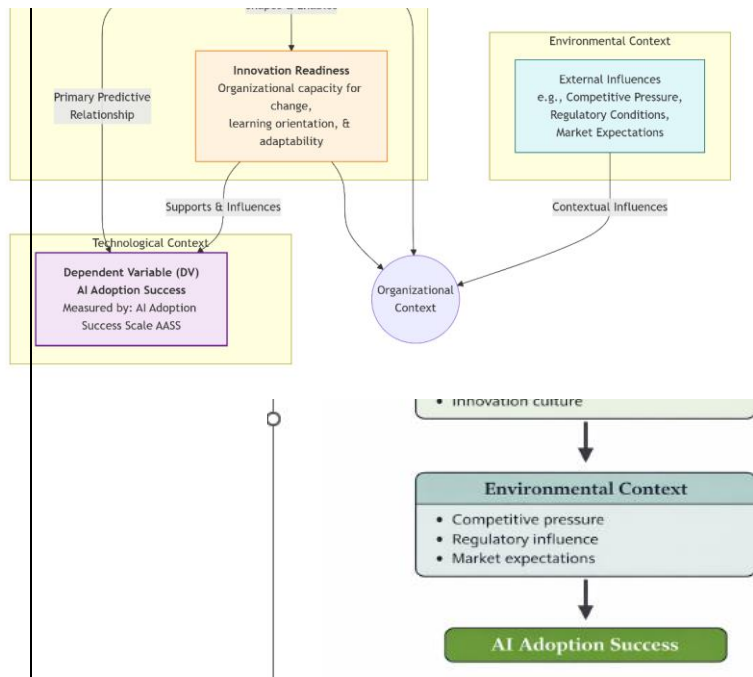
The TOE framework is an outcome of the work of Tornatzky & Fleischer, who created the model to analyse the impact of organisational factors on the acceptance and use of technological innovations. The framework originally focused on internal organisational features and external factors that influence innovation decisions. With the advent of newer digital technologies and newer organizational capabilities, scholars extended TOE to cover these. Zoppelletto et al. (2026) extended the framework to include the impacts of organizational readiness and managerial competence on technology adoption outcomes. More recent papers have focused on the use of TOE for AI adoption, which outlines the role of leadership ability, innovation readiness, and digital maturity as key organizational characteristics, particularly for small and medium-sized enterprises (Sánchez et al., 2025).

What the Framework is Made of

The TOE framework is made up of three main constructs: Technological context, Organizational context, and Environmental context. The technological context is the characteristics of technology (complexity, perceived usefulness, etc.). Organizational context comprises leadership ability, resources, culture of innovation, and strategic fit. The external context refers to the pressures of competition, the legal and regulatory environment, and market expectations. In this project, the TOE framework is translated into six constructs, which are aligned to the TOE framework: technological context, organizational context, environmental context, leadership readiness, digital maturity, and innovation capability. The constructs offer a framework for the development of the variables and enable the use of validated instruments in this quantitative regression study.

Figure 1

Conceptual Framework Based on the TOE Model



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Note: this is a conceptual framework to guide the study and illustrates the positioning of leadership readiness as the predictor variable within the organizational context and AI adoption success within the technological context. Environmental influences are factors in the context that can be a factor in adoption conditions.

Construct 1: Technological Context

Technological context in TOE is defined as the attributes of the technology being implemented, such as perceived usefulness, complexity, compatibility with existing technologies, and technical infrastructure. Technological factors are related to the attitude of the organization towards AI solutions and their implementation. Technological factors affect the attitude of the organization towards the AI solutions and their implementation in AI adoption. While this study was not directly concerned with the technological context, it does provide valuable background information in the context of small business adoption. Previous studies suggest that, even though technically AI tools can be made

available in small firms, there could be a significant issue for small firms to obtain a benefit from using AI tools if the small firm leaders are unable to assess the technological fit or relate the AI functionality to a small firm's requirements. Therefore, the technological context is a precondition that, together with the readiness of the organization, affects the outcome of adoption.

Construct 2: Organizational Context

The organizational context refers to items within the organization that can affect innovation uptake, such as leadership capacity, organizational culture, strategic orientation, resource availability, and readiness to change. Throughout the TOE framework, the organizational context is always the one that is most critical to the successful adoption of technology in the small business. Innovation success and strategic capacity to leverage emerging technologies like artificial intelligence (AI) are continuing to be a challenge for small businesses in the U.S., leading to disparate outcomes and a competitive disadvantage (U.S. Small Business Administration, 2024). Since the organizational context has the greatest influence on the outcomes of innovation in small firms, the majority of the focus in this study is on organizational context. Organizations are more likely to successfully implement AI into their operations if their leaders have a robust strategic vision, digital literacy, and change management skills. On the other hand, if not sufficiently prepared, there can be cases where progress in implementation is not achieved, and staff members fail to embrace it and attain the anticipated benefits.

Construct 3: Environmental Context

The environmental context involves external pressures and influences such as competition, customers' expectations, regulations, and industry norms. When considering the implementation of AI, small businesses can be encouraged by external factors to innovate even when they are not ready for it. Environmental factors are not directly measured in this study, but are considered important contextual factors that impact leadership decision-making. Market pressures and expectations might drive the adoption of AI solutions, but if there is not enough leadership readiness, it could be ineffective in reaching its goals.

Construct 4: Leadership Readiness (Independent Variable)

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Leadership readiness is the independent variable in this quantitative regression project, and is one of the key elements of organizational context in the TOE framework. Leadership readiness is defined as leaders' strategic awareness, digital literacy, innovation mindset, and ability to manage organizational change. Neumann et al. (2022) highlighted leadership readiness as an important consideration to ensure the successful implementation of technology in small businesses, particularly where the leaders have a direct influence on the strategy and resource allocation. The leadership readiness will be assessed through the use of a pre-existing instrument that has been validated to assess the leadership readiness of leaders to lead AI initiatives. By making leadership readiness a fundamental organizational readiness factor, TOE also offers theoretical support for considering leadership readiness as a determinant of success in implementing AI. Leadership readiness is also highlighted by practitioner research as being a critical factor for effective AI implementation, with surveys across the U.S. showing leadership ability as top among the most important drivers of successful AI adoption in small businesses (PwC, 2024).

Construct 5: Innovation Readiness

Innovation readiness is an aggregate of the organization's potential to innovate and adapt, such as openness for change, learning orientation, and adaptability. Leadership readiness targets individual decision makers, while innovation readiness is about the organisation's environment in which leaders contribute to creating. Lack of leadership preparedness can cause AI programs to stagnate or not meet expectations, resulting in poor ROI and minimal innovation results (Andersson et al., 2024). The concept of innovation readiness goes hand in hand with leadership readiness, influencing how AI initiatives are received and implemented in the organisation. For small businesses, the TOE organizational context is also conceptually related to the TOE's innovation readiness, which is linked to the behaviour of the business's leadership. While not part of the measures used in this study, the concept of innovation readiness is used as a supplementary explanation of the findings of innovation outcomes.

Construct 6: AI Adoption Success (Dependent Variable)

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The dependent variable in this study, which marks the outcome of the study, is the success of AI adoption. Based on the definition of the TOE, a successful adoption occurs based on how successful the implementation and integration of the technological innovation is in the organizational processes. This project will use an outcome-based, validated instrument measuring implementation effectiveness, integration quality, and integration business value to measure the success of adopting AI. By connecting outcomes with organisational readiness and leadership capability, TOE can help to examine the success of the adoption of AI and provide a theoretical explanation of why some small businesses can be successful at adopting AI, whilst others cannot.

Framework Alignment and Application to the Study

The TOE framework offers a theoretically sound base for this quantitative regression project in that leadership readiness is connected with the success of AI adoption by the organizational context. The framework establishes a connection between both variables with existing theory, which helps in determining which variables to use for the study, selecting instruments, and interpreting the resulting statistics. The results would support the TOE-based claims that organisational readiness, specifically leadership preparedness, is a key determinant for innovation outcomes in SMEs, if there is a significant positive correlation between leadership readiness and the success of AI adoption. If it is not strong, the results might reflect that the technological and/or environmental factors are more influential than expected, providing directions for future studies. This is how TOE can be used in the field of Strategy and Innovation for hypothesis testing and interpretation of findings.

Previous studies using the TOE model have proven its effectiveness in the context of AI in small and medium businesses (Sánchez et al., 2025). In the TOE framework, organizational readiness has been highlighted as one of the most influential factors to consider when determining the likelihood of the successful implementation of AI in small businesses. Research on small businesses also suggests that preparedness in leadership has an impact on the results of implementing AI and innovation performance (Andersson et al., 2024). TOE provided a foundation that would give researchers a way to understand the adoption of innovation in different contexts. New research by practitioners in the

United States indicates that leadership capabilities and readiness of the organization have a significant impact on the success of implementing AI within small businesses (PwC, 2024).

Conclusion

The TOE paradigm is considered to be a valid and suitable model to explore leadership readiness as a predictor of the success of using artificial intelligence in small businesses. The framework has a single, well-established theory that guides the study to give conceptual clarity. It connects the topic, problem statement, gap in practice, purpose statement, and research design of the project. Because organizational conditions strongly influence innovation adoption results, it is particularly relevant for small businesses that are under constrained resources. TOE explains how organizational conditions, specifically leadership readiness, impact innovation adoption results. The framework is used to operationalize the key variables and helps to determine the use of instruments used in this quantitative regression project, which are already validated. In the organizational context of TOE, leadership readiness is considered the primary independent variable, while AI adoption success in the technological context is regarded as the dependent variable representing the outcome of the adoption. This alignment provides that data collection and analysis are theoretically-informed and methodologically sound. Overall, the TOE framework not only helps develop hypotheses and select variables but also facilitates.

Project Context

Historical Background and Current Trends

Synthesis of the Scholarly Literature

Synthesis of the Practitioner Literature

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SECTION 3. FINDINGS AND APPLICATION

Relevant Outcomes and Findings

Application and Benefits

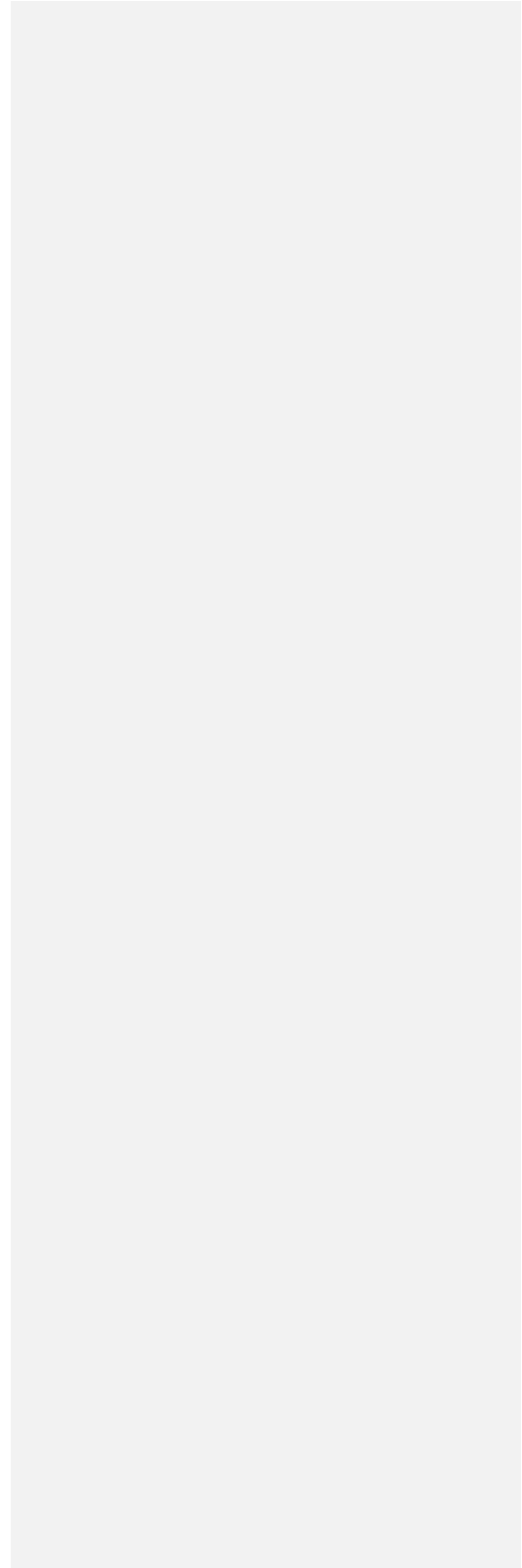
Implications

Recommendations for Policy

Recommendations for Practice

Recommendations for Future Work

Conclusion



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