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REIMAGINING IMPACT INVESTING FOR SMALL BUSINESSES IN THE AGE OF AI

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TABLE OF CONTENTS

OVERVIEW

Time is a small business owner's most valuable asset. From finance to marketing, small business owners often shoulder every responsibility in running their business. Each role requires a substantial amount of time to plan, strategize, execute, and deliver. One survey estimates that nearly 30 million solopreneurs operate in the US.[1] Firms with fewer than 10 employees comprise almost 80 percent of all small businesses.[2]

Small- and medium-sized businesses drive approximately half of our economic output, employ roughly half of all private-sector workers, and are responsible for the bulk of net new job creation. Small businesses and start-ups are the dual engines that drive innovation and economic growth. However, their influence has diminished as the number of small businesses launched over the past few decades has decreased.

Small business creation declined throughout the early 2000s. Annual "births" of new establishments dropped 25 percent from around 4.1 million in the mid-1990s to around 3.0 million in 2015, according to the Bureau of Labor Statistics (BLS) Business Employment Dynamics.[3] After 2006, firm formation waned further—until the COVID-19 pandemic, which triggered a dramatic reversal: New business applications, which are viewed as a leading indicator of entrepreneurial activity, surged by almost 135 percent from April to July 2020.[4] This spike marked the highest volume of monthly applications since recordkeeping began in 2004. Applications remained above trend for several years, leading many experts to wonder whether the decades-long structural decline in entrepreneurship had finally come to an end.[5]

Five years on, however, we are starting to see a reversion to previous downward trends—trends with long-term economic consequences if left unchecked.[6] Can technology help reverse these structural trends?

With the explosive launch of ChatGPT in 2022, artificial intelligence (AI) has become accessible to the masses. It has democratized technology, providing time- and resource-strapped small businesses with access to AI in ways previously not possible. It also provides impact investors with new ways to grow their impact. By investing in AI technology that targets small business challenges, impact investors can redefine what impact looks like and expand their scope of impact.

This paper introduces two frameworks to guide impact investors in making strategic decisions about where to invest and how to approach AI investments as part of their overall impact strategy.

The first section of this paper describes a data-driven framework to assess the systemic challenges facing small businesses. In general, small businesses rarely receive the focus they should from the impact investment community. Impact investors typically target specific themes, such as microfinance, or select demographics. Few strategies target the shared structural barriers that affect many, if not most, small businesses. Our approach complements traditional impact strategies by addressing the root causes of these challenges, regardless of sector, geography, or demographics. Investing in technologies that seek to address these common challenges has the potential to create second- and third-order impact effects beyond the specific investment itself.

The second section describes a framework to evaluate potential investments in AI companies that serve small businesses, which is informed by an analysis of recent academic research on AI. The research helps us systematically identify how and where AI can meaningfully reduce burdens on small business owners

and improve business outcomes rather than following technology hype cycles. AI cannot address all small business challenges. Certain tasks are better suited for technological interventions. Given the limited time and financing available to small business owners, we outline where the application of AI shows the most potential, based on current research.

The ideal investment exists where AI excels, and small business challenges overlap. Maximizing impact will come from investing in the tasks best suited to AI. Taken together, these frameworks should help guide impact investors to the technologies with the greatest potential to amplify their impact.

In many ways, technology has lowered the barriers to launching a small business. Expensive or specialized tasks, such as website creation, are now more manageable and less expensive to do. Yet the barriers to small business survival have never been higher. Small business owners compete in a marketplace that is becoming increasingly dominated by large companies with deeper pockets and ready access to the most advanced technology. Can AI help level the playing field for small businesses? What investments are needed to enhance AI's potential to support small businesses?

PART I: USING CHALLENGES TO GUIDE IMPACT INVESTMENTS

The Global Impact Investing Network defines impact investing as "an intentional desire to contribute to measurable social and environmental benefits." It uses evidence and data where available to drive intelligent investment design.[7] It seeks to generate a positive impact in a specific area or for a specific demographic as well as a financial return.

Our framework broadens this lens by using the challenges experienced by a wide range of small businesses to guide investment decisions. It complements traditional impact investments by translating systemic challenges into actionable investment opportunities. In economics, the multiplier effect is a concept that describes how a change in spending in certain areas leads to larger increases in economic activity. We believe our approach has the potential to amplify impact investments by targeting shared challenges, thereby reaching a larger number of small businesses. Technology can be viewed as a tool to multiply impact.

To develop this target investment framework, we compiled and synthesized data from six major surveys: the Federal Reserve's Small Business Employer Survey[8] and Non-Employer Survey,[9] as well as surveys from Mastercard,[10] ADP,[11] On Deck,[12] and GoDaddy.[13] Together, these sources capture insights from tens of thousands of small businesses. Although the individual surveys differ in their questions and methodologies, when viewed collectively, the findings can be organized into two main categories and then into five major themes (see Figure 1).

Figure 1: Aggregate Summary of Small Business Challenges

Financial Challenges		Operational Challenges		
43%	28%	28%	19%	47%
Reaching or Acquiring New Customers	Access to Capital	Operations Management	Regulations	Inflation Management
Weak Sales or Difficulties Growing Sales	Credit Availability	Supply Chain and Logistics	Licensing and Permits	Increased Prices of Cost of Goods Sold
Uneven Cash Flow		Hiring and Retaining Staff	Taxes	Rising Wages

Note: The percentages represent a simple average of the six surveys.

Source: Milken Institute (2026)

We used systems theory to develop the framework to analyze the broad challenges facing small businesses. This theory assumes the parts of a system are related to each other and to other systems.[14] "A system is an interconnected set of elements that is coherently organized in a way that achieves something."[15] This structured approach to thinking about and analyzing a problem improves the ability to identify the root causes of problems and, in turn, new and better ways to solve them. Here, small business challenges frame the system. Aggregating and mapping the system of small business challenges in this manner enables one to better see how these challenges connect and compound.

For example, access to capital is often cited as the most common and significant challenge, but results from the six surveys suggest that financial difficulties are far more complex. They stem from not only a lack of access to financing and loan readiness but also upstream issues such as reaching customers or weak sales. If a small business has a difficult time reaching or acquiring new customers, as the surveys highlight, then weak sales and uneven cash flow are more likely to arise.

Figure 3 highlights several factors that are not included in the surveys we reviewed, but that could be the cause of these customer acquisition or customer reach challenges. Additional research is needed to understand why this challenge persists. A loan might be a partial or temporary fix for other, more systemic problems that impact a company's cash flow. It does not necessarily address the root cause of the cash flow problem. Aggregating challenges across these surveys enables one to more clearly see how the individual challenges relate to one another.

Running a small business is a collection of tasks. Again, most small business owners are solopreneurs or microbusinesses and handle most, if not all, of the tasks required to operate the business. Systems analysis helps reveal this complex reality that small businesses face. Donella H. Meadows opens her book *Thinking in Systems* with the following quote from Russell Ackoff: "Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other"[16] (see Figure 2).

Figure 2: How Challenges Connect and Compound

Source: Milken Institute (2026)

Using our framework, impact investors can analyze how these challenges both connect and compound. By understanding this dynamism, they can more easily identify the most effective intervention points to amplify the impact of their investment. In systems analysis, these are called leverage points, which are not always intuitive, as discussed in the book *Thinking in Systems*. The author notes that often there is no easy way to identify leverage points. Systems analysis forces one to step outside and see a system as a whole to identify them. Leverage points target the root causes of a challenge.

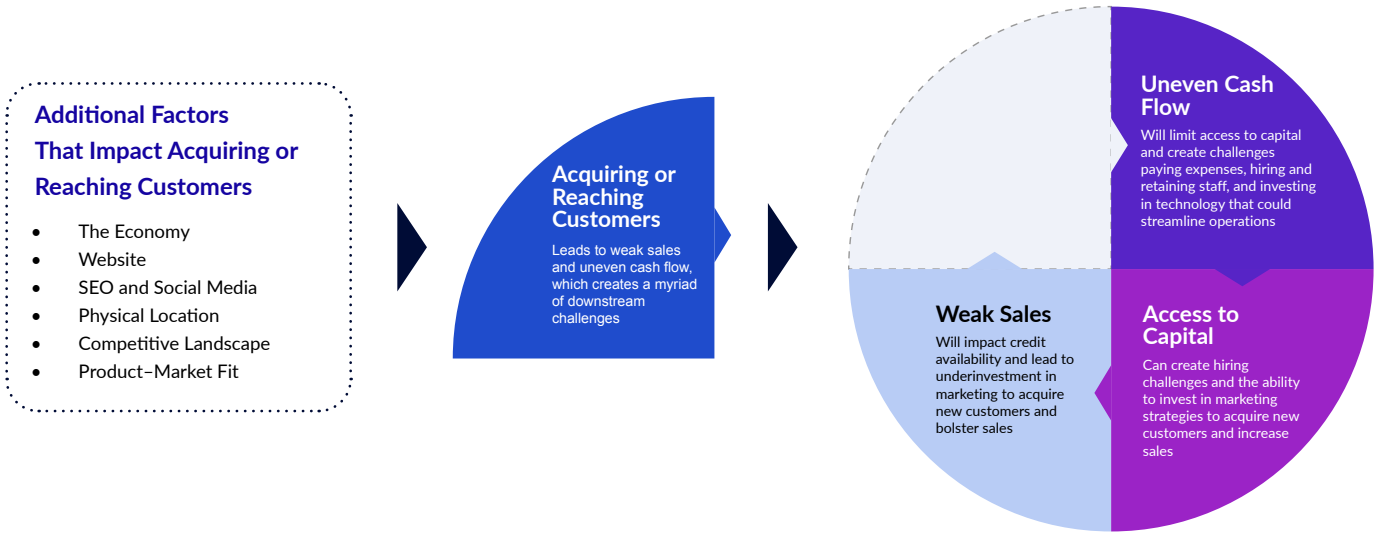
"Leverage points are places within a complex system (a corporation, an economy, a living body, a city, an ecosystem) where a small shift in one thing can produce big changes. This idea is not unique to systems analysis—it is embedded in legend. The silver bullet, the trimtab, the miracle cure, the secret passage, the magic password, the single hero who turns the tide of history. The effortless way to cut through or leap over huge obstacles. We not only want to believe that there are leverage points, but we also want to know where they are and how to get our hands on them. Leverage points are points of power."[17]

Investing in AI as a tool to amplify impact and generate second- or third-order impacts beyond the investment itself requires understanding where leverage points lie. The six surveys provide a starting point to better understand the challenges that small businesses face, but do not capture the full scope of the challenges, as Figure 3 illustrates. Each reported challenge consists of a series of factors driving that challenge. Our framework provides the structure to further break down those challenges in a way that better reveals the root causes driving those challenges.

For example, acquiring customers and growing sales is the number one challenge facing small businesses, according to many surveys we reviewed (see Figure 1). These are also leverage points within the system of small business challenges.

Enhanced customer acquisition and sales strategies strengthen multiple aspects of a business simultaneously: cash flow, debt repayment, operational expenses, employee hiring and retention, and marketing. Steady revenue leads to stronger financials, which, in turn, improve creditworthiness and loan readiness. As Figure 3 shows, multiple factors affect a small business owner's ability to acquire customers—factors that are not captured in these surveys and can change over time. Systems analysis helps impact investors understand the underlying factors that dominate the stated challenge and what is driving them to better match technological interventions.

Figure 3: Understanding the Root Causes Driving Challenges Is Essential to Maximize Impact



Source: Milken Institute (2026)

The framework also allows impact investors to monitor and assess the evolution of challenges over time. For example, inflation and supply chain issues emerged during the pandemic and were considered by many (including the Federal Reserve[18]) to be transitory—yet both have persisted.

Challenges Should Shape Investment Decisions

Similar to an index used by a traditional portfolio manager to guide investment decision-making, this framework provides impact investors with a structured benchmark to inform allocation decisions. Aggregate survey percentages can be perceived as suggested portfolio weights to guide investment allocations. The higher the percentage reported across the surveys, the larger the challenge. Investors could choose one survey or devise their own survey to guide investment decisions, but we believe using a variety of surveys captures a wider sample of small business sentiment.

By systematically analyzing and quantifying the challenges and the drivers of those challenges, the framework enables impact investors to target investments toward broad, systemic solutions. Rather than focusing on singular or isolated issues, this approach creates opportunities for second- and third-order effects across the small business ecosystem.

PART II: AI ASSESSMENT AND EXAMPLES OF AI APPLICATIONS

Because solopreneurs and microbusinesses comprise the bulk of all small businesses, the potential to harness and apply these new technologies is significant. AI has the potential to make these small businesses, which are both time- and resource-strapped, if the technology is developed with the practical needs of these owners in mind.

Technology adoption is rarely straightforward. The fast pace of AI innovation can create a fear of being left behind, leading companies of all sizes to adopt tools prematurely or even unnecessarily. This fear can cloud the objective assessment of a technology's true capabilities and potential impact.

Drawing on recent academic studies on AI, we identify the areas in which small businesses can best use AI at this stage of its development. Impact investors should be able to evaluate what AI can do well, where it falls short, and how it addresses the challenges facing small businesses. They should be able to distinguish between truly innovative solutions and platforms from those that have been rebranded as AI for marketing or fundraising purposes. In short, fully realizing AI's potential to help small businesses requires impact investors to identify technology that delivers tactical solutions that add real value to the small business, its processes, and its customers.

Academic Literature Review

To develop a framework for assessing AI's potential to best empower small businesses, we reviewed research from a variety of institutions, such as the Massachusetts Institute of Technology (MIT) Project NANDA, University of California (UC)-Berkeley Haas School of Business, Stanford University, and several others. We defined AI broadly to include generative AI, agentic AI, and natural language processing (NLP), along with large language models (LLMs) and audio, video, and image models.

Few academic studies have examined AI adoption among small businesses, though we hope to see more in the future. As such, we focused on understanding AI's core strengths and weaknesses, the types of tasks for which AI is best suited, risks in implementation, and conditions for success (see Figure 4). Although small businesses face different challenges and constraints and have unique technology needs relative to large corporations, the conclusions from these studies provide relevant insights and guidance. Detailed summaries of these academic studies are in Appendix I.

Overarching Themes from the Academic Research

- Most corporate investment and media focus have been on AI support of marketing, yet multiple studies show a higher return on investment (ROI) in back-office tasks, that is, simple, high-frequency, or routine tasks. Appendix IV includes additional frameworks to help business owners evaluate where and whether to apply AI.
- Tools must be integrated into workflows to maximize the ROI, improve adoption rates, and fully realize potential productivity gains.
- Enterprise tools and models must be able to learn from feedback and context.

- Investments in training and technical assistance on how to use and incorporate AI will be crucial to optimizing AI implementation.
- Using AI for training and coaching offers significant promise given its ability to provide customized and adaptive courses.
- A more detailed SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis can be found in Appendix III.

Figure 4: Summary of AI's Strengths and Weaknesses

Where AI Excels	Where AI Falls Short
Narrow, well-defined, or repetitive tasks	Complexity
Interpolation and synthesis	Extrapolation—cannot see new things
Information retrieval	Problem-solving
Education and training	Lack of model transparency and model hallucinations
Content generation such as text, images, and code	EPOCH human characteristics: empathy, presence, opinon, creativity, hope

Source: Milken Institute (2026)

At its current stage of development, the research we reviewed shows that AI has the potential to reduce time spent on administrative tasks and improve efficiency and productivity. However, the tools and technologies being developed must be careful not to create additional workflows. Appendix IV provides a cost-benefit framework that both small business owners and impact investors can use to assess whether applying AI is worth exploring. Practical applications are paramount and must be prioritized by investors evaluating potential investments as part of an impact strategy designed to help small businesses.

PART III: TRANSLATING CHALLENGES AND RESEARCH INTO TACTICAL INVESTMENTS

When evaluating potential investments, impact investors can use the collective academic research to assess whether the AI technology addresses or maps to the challenges facing small businesses. Ideally, investments in AI solutions should align the technology's proven strengths with the most urgent operational challenges facing small businesses. Real value lies in the nexus between where AI excels and small business challenges (see Figure 5).

Figure 5: Optimal Investments Lie in the Overlap

Source: Milken Institute (2026)

Both the MIT Project NANDA[19] study on AI usage and preliminary findings by the University of St. Andrews[20] show that the highest ROI in AI investments comes from the automation of back-office or administrative-type tasks, such as using AI to schedule staffing needs or plan menus to help reduce food waste. These findings are consistent with strategic advice from professors Nathan Furr and Andrew Shipilov, as well as MIT's Rama Ramakrishnan, who have all devised frameworks to help organizations more effectively harness AI's potential by focusing on individual tasks (more information can be found about these strategies in Appendix IV). Professor Ramakrishnan highlights how some tasks, such as writing ad copy, have more room for error and often require a human to oversee the AI work, which creates new workflows and adds to potential expenses.[21] Yet, both large corporations and small businesses have directed the bulk of their AI budgets to, or are primarily using AI for, marketing.

The NANDA study highlights this investment bias, noting that "budgets favor visible, top-line functions." A survey of more than 1,000 small businesses conducted by Public-Private Strategies[22] found that 86 percent are using AI applications for marketing and customer engagement, and only 46 percent for back-

office systems/operations support. Survey responses show demand for AI tools focused on data and trend analysis to assist with forecasting cash flow, understanding customer buying patterns and seasonal trends, and managing staffing or inventory. Which begs the question, what is driving this disconnect?

- Are there not enough companies developing AI tools for back-office functions?
- Do businesses realize that ROI is higher when AI is applied to simple, repetitive back-office administrative tasks?
- Have small and large firms alike been swept up in the hype surrounding AI and marketing and content generation?
- Are businesses falling into the same trap observed in the UC-Berkeley Haas study, whereby entrepreneurs asked AI to tackle complex problems, thereby reducing potential gains from AI use?
- Could the above suggest that the suboptimal ROI from AI stems from an education or awareness gap?
- Is it because the technology is so new and has developed so quickly that the research to systematically and objectively assess what AI does best is just catching up?
- Or is it some combination of the above?

Effective deployment of AI requires understanding what it can and cannot do well. Together, our two frameworks, which use small business challenges to establish investment priorities and an objective assessment of AI's capabilities, can help guide impact investors to prioritize AI investments in solutions that offer practical utility and long-term value to small businesses.

Again, time is a small business owner's most valuable asset. When evaluating whether to incorporate AI into its operations, a small business must consider the trade-off between the time spent on a task and the cost of its current process, compared to the time and cost of incorporating a new technology.

The adoption of chatbots for customer service and appointment scheduling is one example of early AI technology that solves multiple challenges. Chatbots are often low-cost technological solutions that address both hiring and rising wage problems. In general, the benefits of this technology outweigh its costs, which likely helped lead to its adoption by businesses large and small. When adopting a new technology, it must either increase productivity or profitability. Ideally, it does both. We present a framework that both small business owners and impact investors can use to evaluate this trade-off in the Appendix.

If AI tools are designed with the practical needs of small businesses in mind, they offer tremendous potential to help them compete more effectively in the modern economy that favors size and scale (see Figure 6). An NFIB survey found that 65 percent of small business owners believed that new technology helped them stay competitive.[23] The US Chamber of Commerce found that 84 percent of small businesses plan to increase the use of technology, even though they acknowledge that barriers to adoption persist.[24]

AI has the potential to help time-strapped small business owners become more self-sufficient and efficient. Tasks that once required specialized skills, such as coding or data analysis, can now be accomplished with a series of prompts. However, much work remains to educate small business owners about how and where they should ideally use AI based on its current state of development to fully realize this potential.

Figure 6: Top Tasks Where AI Should Benefit Small Businesses

Financial Challenges		Operational Challenges		
Reaching or Acquiring New Customers	Access to Capital	Operations Management	Regulations	Inflation Management
Weak Sales or Difficulties Growing Sales	Credit Availability	Supply Chain and Logistics	Licensing and Permits	Increased Prices of Cost of Goods Sold
Uneven Cash Flow		Hiring and Retaining Staff	Taxes	Rising Wages

Where AI Can Help Small Businesses				
Customer marketing and personalization	Expense tracking and bookkeeping	Inventory management	Compliance reporting	Scheduling appointments and staff
Cash flow forecasting	Data analysis and insights	HR and resume screening	Regulatory research	Fielding customer service inquries

Source: Milken Institute (2026)

FINAL CONCLUSIONS AND RECOMMENDATIONS

AI has brought us to a pivotal moment of technological revolution. This technology has the potential to address the challenges facing small businesses in ways we could only imagine. How and where impact investors and other small business support organizations invest in AI will, in part, shape whether the small businesses they serve are left behind in this tech revolution.

Given the rapid pace of AI's development and its potential to create real value for small businesses, how and where to implement this technology cannot be a niche side project. AI must become a dedicated focus and workstream within any small business support organization. We believe that impact investors who focus on small businesses must broaden how they think about and define impact beyond specific issues or demographics to include technologies that seek to address the systemic challenges that most small businesses face. AI, if developed with the needs of small businesses in mind, can help address the root causes of these challenges and help more small businesses not only survive but also thrive.

We believe the following recommendations will help coordinate the emerging efforts in AI and unlock its full potential for a positive, broad-based impact on small businesses.

Launch an Incubator Fund Focused on AI Solutions for Small Business Challenges

This dedicated AI solutions incubator would invest in AI-native applications that use the small business challenge index referenced in the first part of the paper to guide investment decisions to support small businesses.

For example, the 25m Evolve AI incubator, led by the venture firm 25 Madison, with funds from Apollo, nurtures business-to-business enterprise start-ups and focuses on providing AI-native solutions for Apollo's portfolio companies. These incubations are designed to leverage the latest advancements in AI to tackle the key challenges facing Apollo's portfolio companies and provide them with the technology tools to "adapt to an ever-changing digital landscape, equipping them with the tools to drive operational improvements and better compete."[25] These platforms are not only available to Apollo's portfolio companies, but also are market-based solutions.

We believe that small businesses would benefit from a similar dedicated incubator fund.

Start a Small Business AI Advisory Network

The network would be a formal convening of like-minded impact investors, academics, philanthropists, trade organizations, small businesses, governmental organizations, and other interested parties focused on technology solutions for small businesses. It would serve as an ideation forum to find points of collaboration among network members and as a regular forum for ongoing research into how and where to apply AI for small businesses.

Given the speed of AI's development and the limited time that small business owners have to research and learn how to apply AI, it will be crucial for the leading small business support organizations to provide guidance on AI adoption.

Introduce AI-Focused Small Business Support Services and Resource Guides

Small business technical assistance (TA) programs should be augmented and updated to discuss how and where small businesses should apply AI. Small businesses would benefit from a series of strategic toolkits, templates, playbooks, use cases, and training that focus on where to apply AI effectively and how to implement it optimally.

These same TA providers could enhance their programming and better meet small businesses' needs by taking advantage of AI's ability to customize their training and education courses. AI shows great promise in education and training. AI could transform TA programs by extending their reach and personalizing courses for different entrepreneurial stages and sectors.

APPENDIX I: ACADEMIC LITERATURE REVIEW

MIT NANDA: The Gen AI Divide, State of AI in Business (2025)[26]

- This was a study of 300 large corporations and start-ups using AI.
- Only 5 percent of AI pilot programs achieve rapid revenue acceleration—95 percent have had little to no measurable impact on profits and losses.
- The failure rate is attributed to brittle workflows, weak contextual learning of the models, flawed enterprise integration, and misalignment with day-to-day operations.
- Users are skeptical about vendor offerings: "We've seen dozens of demos this year. Maybe one or two are genuinely useful. The rest are wrappers or science projects."
- Generic tools such as ChatGPT are widely explored but have been found to stall progress because they interrupt workflows and do not learn or adapt to proprietary workflows.
- Perceptions exist that the tools cannot be trusted for "high stakes" or complex work.
- Successful projects share three features: deep integration into specific processes, continuous learning capability, and evaluation based on business outcomes rather than technical benchmarks.
- The companies doing well with AI pick one pain point and execute well.
- The highest ROIs are found in back-office automation, not sales and marketing, where most AI spend has been concentrated.

Can We See it in the Numbers Yet? Artificial Intelligence, Firm-Level Productivity, and SMEs (2025)[27]

- This was a study of around 10,000 small- and medium-sized enterprises in the UK adopting AI.
- Productivity gains ranged from 27 percent to 133 percent, but results varied by sector and use case.
- The highest ROI came from low-cost, embedded AI applications such as automated staff rostering and content generation.
- Solutions that embed into everyday workflows and offer a plug-and-play-type setup deliver stronger and faster adoption.
- Noted barriers are high implementation costs, lack of technical expertise, and cultural resistance.

The Rise of Industrial AI in America: Microfoundations of the Productivity J-Curve(s) (2025)[28]

- "AI isn't plug and play, it requires systemic change, and that process introduces friction."
- Research reveals a J-curve in productivity in technology adoption—in the short term, a slowdown occurs before long-term gains and benefits appear.

- The slowdown is not just a matter of growing pains; it points to a deeper misalignment between new digital tools and legacy operational processes.
- Many AI systems also require complementary infrastructure, staff training, and workflow design—without which even the most advanced technologies can underdeliver or create bottlenecks.
- The results show the importance of complementary practices and strategies.

The Uneven Impact of Generative AI on Entrepreneurial Performance (2025)[29]

- A GPT-4-based AI mentor delivered via WhatsApp offered advice to Kenyan entrepreneurs.
- High performers (above median at trial start) increased revenue by 15 percent, while low performers did approximately 10 percent worse with AI assistance.
- Impact depends heavily on task complexity and user baseline.
- The sheer multitude of tasks involved in running a business increases the complexity of effectively learning how to improve business performance.
- Low performers were likely to ask for "generic" advice.
- Successful scaling up of this modern technology to benefit everyone will require improvements to the underlying technology and the way we train entrepreneurs to use the technology.

AI May Not Be a Job Killer, After All (2024)[30]

- Wharton professors argue that modern work is complex, and most jobs involve many more tasks than those that AI is good at.
- Although generative AI has advanced rapidly, it has a long way to go before it can function autonomously and predictably. LLMs, such as ChatGPT, can process vast amounts of data, but they cannot parse the data accurately and are prone to providing misleading information.
- Generative AI is evolving at an impressive pace, yet it still falls short of functioning autonomously and with dependable consistency.

The Cat Sat on the …?" Why Generative AI Has Limited Creativity (2025)[31]

- This paper applies the standard definition of creativity (effectiveness plus originality) to the output of LLMs and shows that LLM output has an upper limit.
- This research finds that the creativity output is mathematically constrained to a level between amateur and professional human creativity.
- The findings have implications for claims about AI autonomy regarding creativity.

The EPOCH of AI: Human-Machine Complementarities at Work (2024)[32]

- The EPOCH (Empathy, Presence, Opinion, Creativity, and Hope) framework captures human capabilities that complement, rather than substitute for, AI.
- This framework distinguishes AI's roles in augmenting versus automating work.

APPENDIX II: HIGHLIGHTS FROM OTHER ACADEMIC STUDIES

AI itself is not a sustainable competitive advantage—differentiation will be built on human creativity. Every serious technological advance becomes equally accessible to every company. AI does not change the fundamentals of sustainable competitive advantage. Part of AI's value is that it is copyable, scalable, repeatable, and uniform.[33]

OpenAI has admitted that hallucinations are mathematically inevitable, not just engineering flaws.[34]

Apple found that Large Reasoning Models face complete accuracy collapse beyond certain complexities and exhibit a counterintuitive scaling limit.[35]

The benefits of AI adoption are greater at firms that also invest in complementary technology and pursue an internal research and development strategy. AI adoption at low levels does not suggest significant revenue growth, but as the intensity of AI adoption increases, revenue growth occurs.[36]

Prescriptions, when it comes to AI, can never be definitive because circumstances change, which underscores the importance of understanding the risks and opportunities of recent technologies to identify potential disruptions and threats.[37]

APPENDIX III: AI STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT) SUMMARY

Strengths	Weaknesses	Opportunities	Threats
• Automation of routine, repetitive, well-defined tasks • Interpolation and synthesis of data • Education and training • Content generation: text, code, images • Customization capabilities	• Cost (time and resources) • Integration challenges (time and resources) • Cannot handle complex tasks • Model hallucinations • Data dependence • Model transparency • Evolving privacy, risk, and regulatory concerns • Can't handle EPOCH tasks	• Better analytical capabilities to assist with key challenges, such as cash flow prediction, inventory management, hiring, and staffing • Reducing hiring needs through automation • Customized coaching and training • Customization of marketing outreach or customer service	• Highly competitive, fast-changing landscape—what's innovative today is standard in months • Hype, bias, or misinformation in models • Diminishing returns on model improvement • Concentration risk in models • Regulatory changes

APPENDIX IV: WHAT IS GOOD ENOUGH AND HOW TO THINK ABOUT WHERE TO APPLY AI

There is no hard and fast rule regarding what is "good enough" or whether an AI tool is worth exploring or worth the investment. These decisions and the ROI will vary by business. The stage of the business, financial situation, and technological sophistication all factor into the ROI. Small businesses must first analyze the tasks where AI can potentially help and then evaluate whether the trade-off between the cost of the platform, time saved, and efficiencies gained is worth the investment. Understanding these trade-offs will help not only small businesses but also impact investors looking to invest in AI as part of their overall impact strategy.

Below, we include additional research from MIT and INSEAD to help small businesses identify which tasks are a good fit for AI. We then construct an additional framework to help small businesses evaluate the trade-offs of whether an AI investment is worth exploring.

MIT Professor Rama Ramakrishnan provides a framework to help small business owners think about where to apply AI. He notes, "Jobs are a collection of discrete tasks that vary in how well they can be automated with generative AI."[38] This approach reinforces the lessons from other academic studies—that AI generates the highest ROIs when it is applied to routine or specific tasks. To help identify these tasks, he suggests doing the following:

- Break workflows into jobs and tasks.
- Assess the cost of automating tasks.
- Build, launch, and quickly evaluate these AI pilots.

INSEAD Professors Nathan Furr[39] and Andrew Shipilov's IFD framework (which stands for intensity, frequency, and density), complements Professor Ramakrishnan's approach. They found that most digital initiatives at large companies failed because they were not connected to real business value. Companies tend to fund scattered pilots in marketing and sales while avoiding the more difficult work of transforming core operations. The companies that got digital right did not run the most experiments—they ran the most focused experiments.

They found that the best AI experiments accomplish three things:

- Solve real problems and do not just cut costs.
- Start small and iterate quickly.
- Offer a clear path to scale.

Successful organizations learned the following from digital transformation:

- Experiments were connected to their core strategy.
- The problems they chose to tackle were based on intensity, frequency, and density to gauge potential impact.

- Intensity—How painful is this problem?
- Frequency—How often does it happen?
- Density—How many people are affected?

- Experimental pilots were designed with scaling in mind from day one.

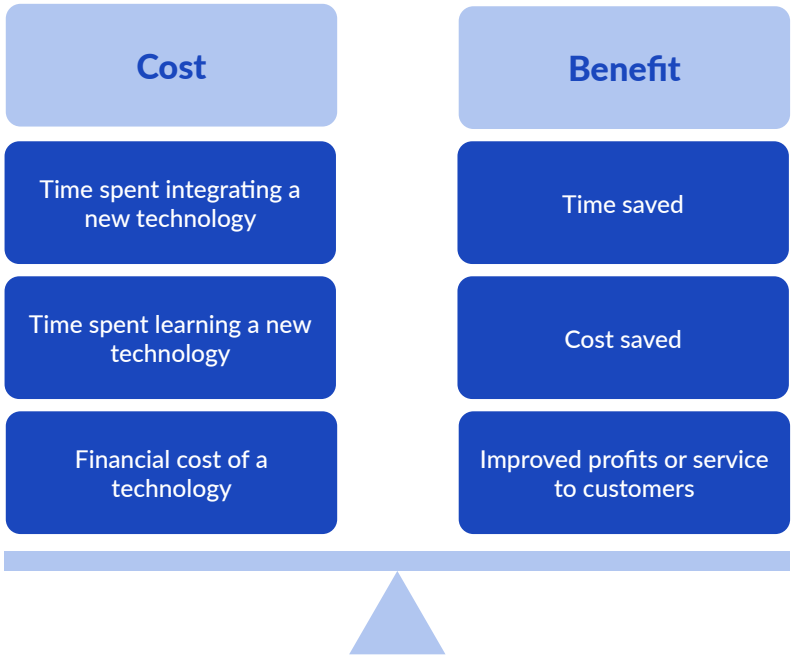
Small businesses have different resource constraints compared to large businesses. How and where they apply AI is affected by those constraints. Solopreneurs and microbusinesses wear many, if not all, of the hats required to run their business, often operate with thin margins, and have fewer resources to invest in new technology. Thus, they must think about trade-offs that are not necessarily an issue for large corporations.

Whether a technology is worth adopting depends on the cost of the AI tool relative to the cost of performing the task without the tool. Small business owners must understand the full cost of automating the task as well as the full potential benefits.

Will incorporating innovative technologies lead to better profitability or less waste, or free up time for more high-value tasks? Does the technology offer a service not available elsewhere that will enhance the customer experience or provide other benefits? Will it improve efficiency or reduce waste? Does the technology embed into an existing workflow, or does it require a separate process?

What is "good enough" or whether investing in AI is "worth it" will vary by business, but the framework in Figure 7 provides business owners with starting point to evaluate any new technology.[40]

Figure 7: How to Think About Cost-Benefit Analysis of AI Implementation



Source: Milken Institute (2026)

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