

## DEPARTMENT: IT ECONOMICS

# Harnessing Generative Artificial Intelligence: A Game-Changer for Small and Medium Enterprises

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*This article examines the rising adoption of generative AI (GAI) among small and medium enterprises (SMEs) and its potential to enhance operational efficiency and strategic decision making. Although SMEs currently lag behind larger firms in GAI integration, they increasingly utilize these tools to overcome challenges such as resource constraints and high marketing costs.*

Small and medium enterprises (SMEs) often struggle with a skewed playing field compared to large firms, facing greater challenges and fewer resources. In recent years, generative artificial intelligence (GAI) has emerged as a driving force, offering SMEs a more level playing field in various industries. An encouraging sign is that GAI tools are diffusing rapidly, not only among large companies but also SMEs.<sup>1</sup> A February 2024 GoDaddy survey from its Venture Forward initiative polled 3500 small business owners, mostly with fewer than 10 employees and with active GoDaddy websites. Nearly half believe that AI will help them compete with larger businesses (<https://aboutus.godaddy.net/newsroom/news-releases/press-release-details/2024/Generative-AI-levels-playing-field-for-small-businesses-says-latest-GoDaddy-survey/default.aspx>). In general, recent advancements in GAI and large language model tools have played a significant role in democratizing AI access.<sup>2</sup> Smaller firms can now compete with larger companies by using GAI, which offers powerful tools and insights that were previously only available to

big firms, enabling cost-effective and efficient high-value services (<https://tinyurl.com/bdd8e8vw>). For instance, AI-driven predictive analytics can help a retail SME enhance inventory management by optimizing stock levels and lowering waste. As a result, the staff would be able to redirect their efforts toward high-value functions, such as customer relations and strategic sales initiatives (<https://tinyurl.com/mubz25dn>). In another example, small law firms are using GAI to compete with their larger counterparts by leveraging internal data and accessing GAI tools to draft motions and briefs (<https://www.cbh.com/guide/articles/how-small-law-firms-can-use-generative-ai-to-boost-business/>). Instead of hiring additional paralegals and junior attorneys to grow their firm, small law firms are utilizing GAI tools to grow at a fraction of the cost. Pairing the personalized approach and custom legal solutions that a small law firm typically provides with GAI allows this type of SME to be much more competitive than in times past (<https://www.thomsonreuters.com/en-us/posts/legal/generative-ai-small-law-domain-expertise/>).

GAI has the potential to equalize opportunities for SMEs, yet a wide adoption gap persists between them and large enterprises. For example, by early 2024, 87% of global companies surveyed by Bain were

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developing, piloting, or deploying GAI in areas such as software development, customer service, marketing, sales, and product differentiation (<https://www.bain.com/insights/ai-survey-four-themes-emerging/>).

A study commissioned by IBM revealed that, in early 2024, nearly 59% of large businesses in India (more 1000 employees) were actively incorporating AI into their operations.<sup>3</sup> A much smaller proportion of SMEs have adopted GAI compared to larger enterprises (Table 1).

SMEs and large enterprises differ in both the types and the number of activities for which generative AI is adopted, with large enterprises typically leveraging AI for a wider range of complex tasks. Large corporations implement GAI in numerous applications, maximizing its potential to streamline operations, optimize customer experiences, and foster creativity. For instance, in 2023, Sam's Club reported performing 35 million fewer tasks in stores compared to the previous year, largely due to the implementation of AI, which enhanced inventory management for associates.<sup>4</sup> Especially with the advent of emerging technologies such as GAI, SMEs are falling behind as they are unable to fully leverage their potential, unlike their larger counterparts, even among those that have adopted these technologies, their usage remains limited (<https://www.weforum.org/agenda/2023/06/>

[amnc23-smes-can-thrive-in-the-cognitive-economy/](https://www.weforum.org/agenda/2023/06/amnc23-smes-can-thrive-in-the-cognitive-economy/)). Regarding the types of activities, although large enterprises might harness AI to enhance complex and sophisticated activities such as global supply-chain management, predictive analytics, and advanced customer segmentation, SMEs focus on applying AI at a more local level, addressing immediate operational needs. An auto repair shop, for instance, might rely on AI to predict high-demand parts by using historical data, reducing excess inventory while keeping essential items in stock. Similarly, a small retail store could use AI to streamline staffing schedules by analyzing customer traffic patterns, matching employee availability with peak demand. A custom homebuilder could use AI to review past projects' costs and schedules to reduce the time needed to prepare quotes for new projects. According to PYMNTS Intelligence, 96% of SMEs that have adopted AI tools, even if not GAI, consider them useful for simplifying tasks (<https://www.pymnts.com/smb/2024/the-top-3-benefits-small-businesses-get-from-ai/>).

This article explores the current state of GAI adoption among SMEs, highlighting the increasing use of GAI tools compared to larger companies. It emphasizes how GAI can enhance efficiency, decision making, and marketing strategies while addressing the common challenges that SMEs face.

**TABLE 1.** Overview of GAI adoption among small and midsize enterprises: Survey insights (2023-2024)

Time of survey	Conducted by	Sample	Key findings
April 2023	Internet domain registry, domain registrar, and web hosting company GoDaddy	One thousand and three U.S. small business owners	Eleven percent used GAI for business purposes (38% of respondents had tried the technology) ( <a href="https://tinyurl.com/66693jdx">https://tinyurl.com/66693jdx</a> )
May 2023	Accounting software company FreshBooks	More than 1000 North American small business owners	Twenty-five had already tested GAI tools in their business, and two-thirds had plans to test them in their business within the following year ( <a href="https://tinyurl.com/yrk3exak">https://tinyurl.com/yrk3exak</a> )
Between June and December 2023	AI4SP.org	More than 1000 surveys of U.S. SMEs and data from 10,000 organizations involved in workshops and assessments	Fifty-two percent used AI: 37% knowingly used AI, while 15% benefitted unknowingly <sup>5</sup>
December 2023	Business management platform MYOB	1012 SME owners in Australia	Nineteen percent were utilizing GAI, and a further 21% planned to do so <sup>7</sup>
March 2024	GoDaddy	More than 500 U.S. small business owners	Twenty-six percent used it for business purposes (73% of respondents had tried the technology) <sup>8</sup>
Between 21 June and 16 July 2024	U.S. Chamber of Commerce	One thousand one hundred U.S. small businesses (fewer than 250 employees)	Forty percent used GAI (compared to 23% in 2023); GAI was used mainly in marketing for customer insights and communication, with increased adoption of CRM and HRM for managing relationships and recruiting talent ( <a href="https://tinyurl.com/yx8wpejt">https://tinyurl.com/yx8wpejt</a> )

MYOB: mind your own business.

CURRENT STAGE OF GAI USE AMONG SMES

In 2022, more than 25% of the largest companies utilized AI tools to produce high-quality goods and services, while only 3%–4% of SMEs did so (<https://datainnovation.org/2022/03/nsf-data-shows-ai-adoption-in-the-united-states-remains-low-but-big-companies-are-leading-the-way/>). Although a gap remains between large companies and SMEs in the adoption of GAI, the proportion of SMEs that use GAI tools has increased, narrowing the disparity (Table 1).

Surveys have shown that SMEs use GAI both knowingly, through deliberate implementation of AI tools, and unknowingly, when integrated AI features are embedded in the software and platforms that they regularly use.<sup>5</sup> However, many SMEs mistakenly equate basic automation with AI. For instance, a survey by the networking platform AI4SP.org, which included more than 1000 U.S. SMEs and 10,000 organizations in 2023, revealed that 52% actively used AI, while 57% reported some form of AI usage; however, a third confused basic automation with AI or are only experimenting with tools like ChatGPT.<sup>5</sup>

AI adoption status varies among SMEs based on their revenue trajectories, with growing, stable, and

declining companies exhibiting different levels of engagement with AI technologies. For instance, a PYMNTS Intelligence report shows that 51% of SMEs with revenue growth leveraged AI, double the rate of businesses with stable or declining revenues. Notably, 69% of SMEs with falling revenues had never even considered using AI.<sup>6</sup>

LEVERAGING GAI TO OVERCOME THE CHALLENGES FACING SMES

SMEs face several challenges, including higher marketing costs, inefficient customer relationship management (CRM), lower productivity, and greater financial burdens compared to larger firms. GAI addresses these issues by providing affordable marketing tools and personalized communication solutions, boosting productivity and automating financial tasks to reduce cost burdens. For instance, AI is being used by SMEs to automate tasks, cutting costs by automating 10%–20% of operations, which enhances productivity. These automations span content creation, stakeholder management, and cybersecurity, while also supporting legal compliance, fraud detection, and communication processes.<sup>5</sup>

Table 2 outlines various challenges faced by SMEs across key business functions, along with the potential

TABLE 2. Addressing SME disadvantages with GAI innovations.

Function	Disadvantageous conditions facing SMEs	GAI's role
Strategy-making process	Limited time, personnel and resources could hinder strategy-making process.	GAI can significantly enhance strategic decision making for SMEs by offering innovative solutions and detailed scenario analyses.
Marketing	Deloitte survey: smaller companies allocate a higher percentage of their revenue to marketing compared to larger firms.	Platforms like Jasper, Canva, and Adobe Firefly enable SMEs to create social media content and professional visuals more quickly and affordably, while also streamlining design and marketing efforts.
CRM	Small businesses struggle with email communication due to uncertainty about the content and delivery.	GAI provides personalized content: Microsoft's CoPilot drafting tailored emails and responses based on previous interactions.
HRM	SMEs are generally less productive than larger firms.	GAI solutions significantly boost employee productivity.
Accounting, finance, and compliance	Small firms face higher cost burdens relative to turnover, which diminish profitability, while larger firms benefit from economies of scale.	AI solutions like Mika's copilot help small firms reduce cost burdens by automating financial tasks, streamlining value-added tax reporting, and providing AI-driven advice.
Legal	SMEs have fewer financial resources to hire external legal counsel or retain its own counsel.	GAI can help draft basic legal documents like contracts and employment agreements, reducing the number of billable hours that SMEs must pay attorneys.
Data analytics	Start-ups and small firms lack the resource capabilities to conduct large-scale optimization modeling (data warehouses and sophisticated statistical database software).	GAI can be used to generate forecasts, text-mine social media posts, and create predictive models.

benefits of incorporating GAI solutions. It highlights how GAI can enhance strategy making, marketing, CRM, human resource management (HRM), and financial tasks, ultimately driving productivity and reducing costs for SMEs.

## STRATEGY-MAKING PROCESS

GAI can play a key role in the strategy-making process of SMEs. GAI offers smaller businesses new ideas, solutions, and options that surpass the abilities of their management teams, helping them navigate challenges like limited time, personnel, and resources, thereby boosting their strategic development. A small content marketing company leveraged generative AI to create different strategic futures by defining two alternative organizational models and future economic conditions. They then fed this information into an AI assistant like You.com, requesting it to generate detailed “scenarios” for each of the four resulting quadrants. This approach helped the company to explore diverse strategic possibilities, allowing for more informed decision making by visualizing how various organizational structures might fare under different economic conditions. The AI-generated scenarios prompted deeper team discussions on potential futures and how best to prepare the organization to thrive in each scenario.

Facing a significant increase in costs from their supplier, the management of a small company that sells customized trucks sought innovative solutions to maintain their competitive edge. To tackle this, they asked ChatGPT for options to save the business. The AI responded with six strategic choices to mitigate the impact and secure the company’s future, each accompanied by a detailed description of possible actions. The owner of a small Australian winemaking company, with two full-time staff and seasonal workers, faced a major challenge when China imposed a 200% tariff on Australian wine in 2021, her sole export market. To diversify, she turned to ChatGPT, which acted as a strategy assistant, helping her quickly explore export opportunities worldwide and identify new local markets, effectively broadening her business’s reach (<https://hbr.org/2024/06/genai-is-leveling-the-playing-field-for-smaller-businesses>).

## MARKETING

Smaller companies tend to allocate a larger portion of their budget to marketing than larger firms, leading to a notable spending gap in absolute terms. A Deloitte survey revealed that smaller companies with less than \$10 million in revenue spend 15.2% on marketing, while larger firms with more than \$10 billion allocate 7.1%.<sup>9</sup>

With platforms like Jasper, creating social media content becomes faster and more affordable. Canva and Adobe Firefly also allow SMEs to generate professional visuals without significant graphic design costs.<sup>10</sup> Microsoft’s CoPilot can assist with brainstorming ideas for marketing emails to enhance campaign creativity (<https://www.theverge.com/2023/3/6/23627964/microsoft-ai-copilot-customer-support-chatbot-marketing-emails>).

According to a 2024 U.S. Chamber of Commerce survey among SMEs, GAI is widely used in marketing, where it plays a key role in analyzing customer behavior and improving communication strategies to create more personalized experiences (Table 1). AI systems can create a wide range of marketing materials, such as social media posts, blog articles, and even full advertising campaigns. By examining successful content and monitoring current trends, these tools can recommend themes, craft compelling copy, and customize messages for different target audiences. This functionality enables marketing teams to keep pace with consumer trends while significantly reducing the need for manual input. GAI tools have been launched to assist SMEs in marketing activities, such as advertising, by enabling personalized content creation and campaign optimization. The high costs associated with creating advertisements often serve as a significant barrier for brands that aim to break into and experiment with television marketing. In September 2024, ITV, a British free-to-air public broadcast television network, announced an initiative aimed at encouraging SMEs to explore TV advertising by launching two new AI-generated TV ads featuring small businesses. The ads were created through ITV Commercial’s established creative process, incorporating licensed generative AI tools for image and video production, along with contributions from ITV’s professional voice-over artists (<https://www.marketingweek.com/itv-generative-ai-tv-ads/>).

## CRM

The crucial task of CRM, such as sending targeted emails based on specific customer actions, is often challenging for small businesses. Many struggle with email communication due to uncertainty about the content and the delivery. GAI helps by providing effective and personalized content to overcome these hurdles (<https://tinyurl.com/yznuuwap>). A 2024 U.S. Chamber of Commerce survey among SMEs reported a significant increase in GAI adoption for managing customer relationships, enabling businesses to leverage data for more effective customer

interactions and relationship building (Table 1). For instance, Microsoft's CoPilot can draft personalized emails and generate responses for customer service chats and emails based on previous interactions (<https://www.theverge.com/2023/3/6/23627964/microsoft-ai-copilot-customer-support-chatbot-marketing-emails>).

## HRM

Evidence indicates that SMEs tend to be less productive than their larger counterparts.<sup>11</sup> This productivity gap highlights the potential benefits of advanced technologies, as demonstrated by recent findings. GAI systems can pinpoint areas where human resource (HR) practices can be improved and propose adjustments that align more effectively with both organizational objectives and employee needs. This strategic insight is crucial for maintaining a flexible and responsive HRM system that not only supports the organization's goals but also promotes a positive workplace culture. According to a survey by Google Cloud and National Research Group that involved more than 2500 senior executives and C-suite leaders from companies with revenues of more than \$10 million, GAI solutions have doubled employee productivity in 45% of organizations. Furthermore, 70% of these leaders reported enhancements in IT processes and staff productivity due to these AI solutions (<https://tinyurl.com/bdh9m428>). A 2024 survey of the U.S. Chamber of Commerce highlights the increasing role of AI in HR functions, particularly in identifying and recruiting talent as businesses leverage automation to streamline the hiring process and make more data-driven decisions (Table 1).

## ACCOUNTING, FINANCE, AND COMPLIANCE

Small firms endure a disproportionately high cost burden relative to their turnover when compared to medium and large enterprises, with costs sometimes surpassing 10% of turnover, thereby significantly diminishing their profitability.<sup>12</sup> As businesses grow larger, the relative cost of tax compliance decreases substantially, thanks to economies of scale. Larger firms can spread fixed costs over a greater number of tax-related activities and benefit from using specialized staff or automated processes, resulting in increased cost-efficiency.<sup>12</sup>

Despite the higher cost burden small firms face compared to larger enterprises, advancements in AI are offering solutions to mitigate these challenges. For instance, Berlin, Germany-based GAI start-up Mika introduced an AI-powered accounting and tax copilot

that automates financial tasks, streamlines value-added tax reporting, offers AI-driven financial advice, provides real-time support, and interprets communications from financial authorities (<https://tinyurl.com/nmvxsbv9>).

## LEGAL

Expensive legal fees, which often cost \$200–\$500 per hour, can present a financial challenge for SMEs. To reduce legal fees, SMEs can use GAI themselves to draft certain agreements, which they can then present to an attorney to review and edit, instead of drafting from scratch.

In addition, existing online legal tools such as LegalZoom, Rocket Lawyer, and UpCounsel, should trend toward being less expensive as they incorporate AI to further reduce the number of billable hours for a job. This streamlining of routine tasks helps keep costs down, which in turn makes legal support more affordable for SMEs (<https://tinyurl.com/nmvxsbv9>).

## DATA ANALYTICS

GAI can be utilized to sift through large numbers of unstructured data and organize them efficiently and appropriately. Descriptive statistics can be obtained, and trends and outliers can be identified with the use of GAI tools. Small and midsize firms can unlock the potential of GAI capabilities through proper prompt engineering on multiple fronts. With minimal HR capabilities, firms can achieve large-scale text mining of social media posts, analyze customer data, and forecast future trends via environmental scans and competitor analysis (<https://tinyurl.com/379pyb2f>).

## CONCLUSION

The rapid adoption of GAI among SMEs is expected to expand further as advancements in GAI tools enable broader applications across various business activities. GAI is already playing a critical role in SMEs' decision making by offering strategic insights, enhancing functional efficiency across marketing, HR, and finance, and optimizing organizational structures to improve competitiveness despite resource constraints. For instance, GAI can significantly enhance SMEs' strategy-making process by offering innovative solutions and detailed scenario analyses, compensating for limited resources like time and personnel. In marketing, platforms like Jasper and Canva enable SMEs to produce professional content more affordably, addressing the higher percentage of revenue they allocate compared to larger firms. Additionally, GAI boosts productivity in HR, improves CRM with personalized



communications, and reduces financial burdens by automating tasks and providing AI-driven advice.

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