Cost Efficiency to Scenario Planning: Exploring Generative AI Application for Small Businesses in the Age of 5.0

Pooja Darda
Assistant Professor
Marketing Department
Jaipuria Institute of Management, Indore
Indore, Madhya Pradesh, India
pooja.darda@jaipuria.ac.in
ORCID ID-0000-0003-3699-8426

Shailesh Pandey
Associate Professor
Marketing Department
Jaipuria Institute of Management, Indore
Indore, Madhya Pradesh, India
research.shail084@gmail.com
ORCID ID -0000-0002-6210-6623

Sharad Chaturvedi
Professor
Business Analytics Department
Jaipuria Institute of Management, Indore
Indore, Madhya Pradesh, India
sharad.chaturvedi@jaipuria.ac.in
ORCID ID- 0000-0002-6749-0062

Abstract

The purpose of the study is to investigate how small businesses can employ strategic applications of generative AI to leverage potential for scenario analysis and for planning in the midst of Industry 5.0 disruptions. Although Industry 5.0 disruptions are becoming increasingly important for small businesses, research on the strategic applications of generative AI in these organization's is largely lacking. While existing studies especially reveal the disruptive potential of AI for various industries, they do not discuss the implications for small businesses and their unique conditions and possibilities. Additionally, we find very less literature that focuses on the strategic application of AI for small businesses such as planning, scenario analysis and risk management during Industry 5.0 disruptions. The three main research objectives of the research are: RO1: Explore how generative AI could be adopted in small business with a focus on Industry 5.0 disruptions to achieve the strategic business objectives of cost-cutting and labor cost-effectiveness. RO2: To identify the underlying and emerging themes when businesses use generative AI to offer personalized recommendations, perform scenario planning and minimize organizational risks. RO3: How should small businesses navigate the challenges and opportunities inherent in the use of generative AI. It adopts a netnographic research methodology using qualitative data extracted from blogs and YouTube channels to identify themes and sub-themes . Data analysis follows the Braun and Clarke six-step thematic analysis in order to produce the assigned themes. Four main interdependent themes characterize the effective tactical uses of generative AI for SMEs coping with the disruptions of Industry 5.0: cost efficiency, personalized recommendations, scenario analysis, and risk management.

Keywords: Generative AI, Small Business, Scenario Planning, Strategic Planning, Industry 5.0, Netnography

Introduction:

Technological advancements and their rapid and relentless pace of innovation have triggered an unprecedented paradigm shift in

businesses worldwide, an era called Industry 5.0. It is believed that this is about the highly collaborative alliance between humans and machines to leverage emerging technologies in new and innovative ways to generate smarter, better, faster or more robust business processes. Small businesses, owing to the inherent nature of their internal structures, frequently operate on a scarcity mindset, driven by a limited pool of resources. Consequently, the unprecedented transformations Industry 5.0 has triggered in business processes, present the smallest firms with new sets of challenges and opportunities. To thrive and survive in this new era of the industrial revolution, careful planning as well as scenario based strategic thinking are of paramount importance (Rojko,2017; Xu,David ,& Kim,2018).

Nevertheless, these standard modes of strategic planning often rely on more linear projections derived from past historic data and are sometimes ill-suited to engage with the fast-changing, heterogeneous nature of today's business environment (Shoemaker, 1995). Generative artificial intelligence (or 'AI') ought to be a legitimate option. Using generative artificial intelligence, which 'is able to model and "generalize" to solve data-dense problems', it is feasibly possible to generate more complex 'new once' outcomes and strategic predictions or prescriptions by processing its analyses over larger quantities of input from different sources (Goodfellow et al., 2014) an example of generative AI technology that leverages artificial neural networks.

Generative artificial intelligence refers to platforms that generate new output as text, pictures and other forms of data based on reading existing data sets and finding new data generation patterns. In this way firms are able to generate various possible futures and outline plans to navigate them in advance. Use of generative AI for scenario-planning and forecasting can be a crucial future generative capability for small firms, as the use of generative AI can save small firms time, costs and efforts in strategic foresight and scenario planning. First, due to the automation of scenario and stories generation, firms employing generative AI in scenario planning and foresight can save a large amount of time and money in adopting advanced strategic tools like scenario planning. (Kaplan & Haenlein,2019)

For researchers seeking to learn more about artificial intelligence use among small businesses, the practice of netnography – a style of research for understanding online communities can be a good way to make sense of what's unfolding. Instead of attempting to recreate hypothetical scenarios of artificial intelligence use as isolated phenomena in a Sprint-Stand virtual bank (or some more conventional laboratory) environment, it is helpful to see what happens in the world – albeit virtually – that is visible through our avatars. Observing artificial intelligence in use, its impacts and effects, provides more avenues of inquiry into its mechanics – past, present, and emerging. This study uses netnography as a qualitative data gathering technique. It also uses an approach for thematic analysis to find themes and patterns, created by Braun and Clarke (2006).

The primary objective of this researches to explore the role of generative AI in enhancing strategic planning and scenario analysis for small businesses facing the disruptions of industry the study aims to answer the following research questions RO1: Explore how generative AI could be adopted in small business with a focus on Industry 5.0 disruptions to achieve the strategic business objectives of cost-cutting and labor cost-effectiveness. RO2: To identify the underlying and emerging themes when businesses use generative AI to offer personalized recommendations, perform scenario planning and minimize organizational risks. RO3: How should small businesses navigate the challenges and opportunities inherent in the use of generative. Addressing these questions is crucial for several reasons, first, provides a deep or understanding of how small businesses can effectively utilise generative AI to navigate industry disruptions. Second, it's high lights the practical implications of AI technologies for strategic planning, offering valuable insights for business practitioners, policymakers, and technology developers. Finally, it contributes to the growing body of literature on digital transformation and AI applications in business, feeling a gap in current research focused Pacific valley on small businesses (Byrnjolfsson & McAfee,2014).

In summary, this paper explores the transformative potential of generative AI for strategic planning and

scenario analysis in small businesses. By employing a rigorous netnographic approach and thematic analysis, it provides a comprehensive overview of how AI technologies are being adopted and their impacts on business strategy in the context of industry 5.0. The finding has significant implications for enhancing the resilience, efficiency, and competitiveness of small businesses in an increasingly complex and dynamic industrial landscape.

Literature Review:

Organizations could benefit from GAI, but its potential lies particularly in its considerable promises regarding adaptation to democratize an organization's enterprise-level scalability and creativity, through allowing a company, such as a small or a medium enterprise (SME), to reach a higher level of innovation and competition (Rajaram & Tinguely, 2024).

As promised, GAI in organizations, including SMEs, falls into three main strands of challenges: high costs, the challenge of integration, and the unavailability of key skills ((Reznikov, 2024)

This tune was replicated within the recent research that shows that GAI could serve as an easy-to-use and cost-effective survival line to SMEs, presented with help through its use in activities, like customer-churn management, and optimization approaches (Pamungkas et al., 2023).From notable examples of Chat Generative Pre-Trained Transformer (ChatGPT) and GenAI technologies widely applied in Facilities, deliveries, purchases and more, we could witness that artificial intelligence already benefits from enormous gains, especially regarding its promotion levels and sales, compared to the prior methods and styles adopted by manufacturers and humans; examples that literally place AI on a new level and show the dynamics through which the artificial intelligence-related benefits could increase when more millions of processes are currently applied. SMEs should analyse potential pitfalls, including ethical issues of AI usage (Isguzar et al., 2024)

Through brief insights into strategic deployment and practical tips to actual implementation, such literature study depicts the disruptive potentials brought by GAI in SMEs.

Table 1: Literature Review Table

Title	Summary	Research Gap	Research Objective	Reference
Artificial Intelligence and Value Creation at the Crossroads of Industry 5.0	Businesses in Industry 5.0 need AI to create superior value. Human-centered AI (HCAI) is aiding businesses in creating competitive advantage.	HCAI impact on specific industries not explored Limited analysis on challenges of implementing AI in businesses	Analyze AI's role in creating superior business value. Explore HCAI concept for human-machine collaboration in Industry 5.0	(2023). Artificial Intelligence and Value Creation at the Crossroads of Industry 5.0. Advances in business strategy and competitive advantage book series, doi: 10.4018/978-1-6684-6403-8.ch004
Innovative Applications in Businesses: An Evaluation on Generative Artificial Intelligence	GenAI technologies impact businesses with efficiency, profitability, and competition. Legal, moral, and ethical issues arise from GenAI applications.	Future research areas of GenAI technologies in corporate sector Identifying future research avenues in business and management	Provide suggestions on GenAI use in corporate sector Identify future research areas for GenAI technologies	Seda, İşgüzar., Eda, Fendoglu., Ahmed, İhsan, Şimşek. (2024). Innovative Applications in Businesses: An Evaluation on Generative Artificial Intelligence. Amfiteatru Economic, doi: 10.24818/ea/2024/66/511

Title	Summary	Research Gap	Research Objective	Reference
Business Talk: Harnessing Generative AI with Data Analytics Maturity	Generative AI integration challenges and success factors in businesses.	Further exploration needed on real-world efficacy. Practical implications require validation for implementation success.	Pinpoint pivotal success factors for generative AI integration Highlight hurdles and facilitators influencing generative AI implementation	Simone, Malacaria., Michele, Grimaldi., Marco, Buso, Luciano, Giovanni, Greco., Andrea, De, Mauro. (2023). usiness Talk: Harnessing Generative AI with Data Analytics Maturity. doi: 10.5121/ijci.2023.120701
A Generative AI - driven Application: Use of Large Language Models for Traffic Scenario Generation	AI-driven solution using Large Language Models for traffic scenario generation. Overcoming difficulties in creating virtual traffic scenarios for special purposes.	Lack of efficient virtual traffic scenario creation methods. Limited options for safety testing and autonomous driver training scenarios.	Utilize LLMs for generating traffic scenarios linguistically. Overcome difficulties in creating virtual traffic scenarios for special purposes	Çağrı, Güzay., Ege, Özdemir., Yahya, Kara. (2023). A Generative AI - driven Application: Use of Large Language Models for Traffic Scenario Generation. doi: 10.1109/eleco60389.2023.10415934
AI-assisted scenario generation for strategic planning	Examines implications of AI tools for futures and foresight Explores utility of AI-generated scenarios in strategic planning	Utility of AI-generated scenarios compared to human-produced scenarios. Attention to differences in human cognition and AI logic.	Explore implications of AI tools for futures and foresight practices. Assess utility of AI in generating scenarios for strategic planning.	Matthew, J., Spaniol., Nicholas, J., Rowland. (2023). AI-assisted scenario generation for strategic planning. Futures & foresight science, doi: 10.1002/ffo2.148
How generative AI will drive enterprise innovation	Generative AI drives enterprise innovation through operational, product, and business model innovation. Current applications of generative AI are fragmented, with anticipated financial returns.	Early stage in generative AI development cycle. Time needed to confirm projections.	Explore generative AI's potential in enterprise innovation. Highlight fragmented applications and expected financial returns.	Anthony, Marshall., Christian, Bieck., Jacob, Dencik., Brian, C., Goehring., Richard, Warrick. (2024). How generative AI will drive enterprise innovation. doi: 10.1108/sl-12-2023-0126
An AI Planning Solution to Scenario Generation for Enterprise Risk Management	AI planning for scenario generation in risk management. SPA system uses news and domain knowledge.	AI planning for scenario generation in risk management. Application of SPA system in IBM pilot deployment.	Apply AI planning for scenario generation in risk management. Develop Scenario Planning Advisor (SPA) system for IBM pilot deployment.	Shirin, Sohrabi., Anton, V., Riabov., Michael, Katz., Octavian, Udrea. (2018). An AI Planning Solution to Scenario Generation for Enterprise Risk Management.

AI-Based Scenario Generation for Future Planning: An Exploratory Study Using GPT-3	The study explores the potential of AI in forecasting the escalation of the 2022 Ukrainian war. GPT-3 accurately describes the open war as one scenario but has limited predictive capability.	Limited future prediction accuracy by GPT-3. Inconsistent internal scenario generation by GPT-3.	Evaluate GPT-3's ability to generate future scenarios. Determine if AI contribution justifies co-authorship.	(2023). AI-Based Scenario Generation for Future Planning: An Exploratory Study Using GPT-3. doi: 10.33140/jctcsr.02.02.02
Scenario-Based Foresight in the Age of Digital Technologies and AI	Scenario-based foresight is used less in corporate world Digital technologies can enhance scenario-based foresight capabilities	Search string limitations Incomplete forward and backward search results	Identify use cases for digital technologies in scenario-based foresight. Analyze how digital technologies can enhance scenario-based foresight performance	Daehee, Kang. (2023). Scenario-Based Foresight in the Age of Digital Technologies and AI. doi: 10.1007/978-3-031-26490-0_4

Theoretical framework

The Technology-Organization-Environment (TOE) framework identifies how technology, organizational and environmental considerations work in tandem to influence technology choice and adoption in organizations (Tornatzkt & Fleischer, 1990). This has proved an effective way to systematically investigate small business uptake of generative AI since it provides a logic with which to consider the elements that can inform strategic decision-making.

Last, technologically, TOE assesses the capacity of generative AI to do tactical planning and scenario analysis. The ability for generative AI to process massive datasets, model comprehensive and plausible scenarios, and generate prescriptive analytics can aid small business strategic planning. Organizations can engineer entire plants (that's the machine-learning algorithm) that can adapt to a multitude of future states, providing improved decision-making and robustness.

Organizational size, resource endowment and technical maturity drive generative AI adoption so small firms face challenges when evaluating their infrastructure, talent and leadership to integrate AI in core activities. The TOE typology allows for the assessment of organization-specific AI adoption barriers and enablers and the impact of AI technology implementation on organizational preparation and resource allocation.

Strategic planning is a firm-level collective activity, which means that the externally imposed factors might have something to say about whether the firm invests in using AI for such a task. In our research, we went back to the TOE framework, and we investigated how the externally imposed factors require firms to use sophisticated strategic planning tools. We found that, as firms get exposed to changing markets, regulation and the competitive environment, they might find generative AI helpful in allowing better adaption to these 'external' elements. External factors become central to how a firm goes about adopting and deploying AI.

Research Methodology:

Netnography is used in this study as research approach. In order to understand the ways that small organizations are already talking about and using generative artificial intelligence, it can be helpful to do this kind of research. Utilizing netnography approaches allows for assessments of how activity in forums is culturally and socially contextualized. To that end, engaging patterns of activity about generative artificial intelligence will be assessed on blogs and YouTube channels, which offer rich seams of user-generated content and discussion.

All responses were drawn from blogs and YouTube channels discussing generative AI adoption in SMEs as this sector of the economy carries the highest growth potential. I picked these particular sources as they showed user

engagement and a rich qualitative perspective, with the main selection parameters being: i) Popularity and reach of the blog or YouTube channel. ii)Frequency and quality of posts related to generative AI and strategic planning. iii)Engagement metrics such as comments, likes, shares, and view counts.

Purposive sampling was used to choose relevant posts and videos. Posts should be from the past two years in order to ensure data freshness and should cover recent improvements and capabilities in AI technologies. Videos should address controversial topics related to artificial general intelligence and AI in general. The majority of the posts analyzed upon which this study is based were blog posts or media articles found by searching on Google. We identified approximately 50 blog posts and 30 YouTube videos for review to cast a broad and representative net.

Data Analysis:

Thematic Analysis: To be specific, fidelity to the raw data was achieved by following the six phases of thematic analysis guided by Braun and Clarke (2006). The six phases were as follows: (1) familiarization by reading and re-reading the data repeatedly; (2) generating initial codes which were identified through in-vivo coding; (3) searching for themes that brought together initial codes; (4) reviewing themes; (5) defining and naming themes; and (6) producing the report.

Codes were generated from recurring words, phrases and ideas relating to generative AI, strategic planning and scenario analysis, and grouped into themes and sub-themes. Identified themes and subthemes included AIs as a mechanism to improve efficiency and reduce costs, to enhance scenario-making, to improve decision-making processes, to improve intensity and formalization of critical thinking processes, to enhance ability to direct and control external world to ideals, and to improve flexibility and adaptability of human actions. Quoted data-extracts served to substantiate and fund each thematic analysis.

Data Validity and Reliability:

Triangulation: We triangulated the data and cross-checked across blogs, online forums and YouTube channels to uncover candid insights that were not skewed from a single source.

Member Checking: To the extent possible, the researchers checked in with authors of the content in question, in order to verify interpretations and findings. This ensured that the analysis accurately reflected the data-producers' own meaning.

Inter-Coder Reliability: The coding involved every researcher engaging with the transcripts in a consensus manner, which allowed for clarity and reliability in the theme and subtheme development. Differences in coding were discussed and resolved.

Peer Review: Peers and field experts reviewed the research findings to affirm the methodology (how the research was performed), the data analyses and the interpretations as they appeared in the publication. In this way, some of the most important biases and limitations of the research could be made apparent.

Findings & Discussions:

The four main themes cover the strategic applications of generative AI for small businesses facing industry disruptions. The subthemes under each main theme highlight some specific use cases that generative AI can enable. Meanwhile, the challenges listed depict some adoption barriers that SMEs need to address even as they leverage AI's opportunities.

Here is a detailed explanation of the themes and subthemes with references from the research paper:

Theme 1: Cost Efficiency: This theme depicts how small businesses can leverage generative AI to enhance cost efficiency through process automation and data-driven decision support systems.(Drever,2024)

Subtheme1.1. Process Automation: This involves using AI to automate mundane, repetitive tasks like data entry freeing up human resources.

"Reduce operational costs with AI-powered automation of repetitive processes like data entry and customer service inquiries. (If You Don't Have a Generative AI Strategy It's Time to Get One, n.d.)

Subtheme1.2. Decision Support Systems: Generative AI can analyze data and market trends to generate insights and

forecasts to assist business decision making on areas like inventory, pricing etc. This data-driven approach increases efficiency.

"Leverage our AI-powered business forecasting and optimization tools for agile planning. You can dynamically model 'what-if' situations and adapt quickly to meet business goals." (How Generative AI Changes Strategy, 2023)

Subtheme1.3. Data Analysis and Insights: Machine learning algorithms can reveal valuable patterns in transactional and customer data that human analysts may miss. These insights enhance productivity across sales, marketing and operations.

"We are a small retail business looking to use AI to save costs through automating mundane tasks. Can AI solutions provide us personalized product recommendations for our customers and generate financial reports?" (User Post 1, Digital Strategy Forum)

Subtheme1.4. Customer Service Chatbots: By addressing routine customer queries, AI-powered chatbots reduce customer service costs and free up agents to handle more complex requests.

"Reduce operational costs with AI-powered automation of repetitive processes like data entry and customer service inquiries." ((Sharma et al., 2024)

Subtheme1.5. Report Generation: Leveraging NLG or natural language generation, AI tools can create a range of standardized reports using structured data. This reduces manual efforts of employees significantly.

Challenges under this theme involve data privacy, security concerns and workforce anxieties regarding potential job losses from increasing automation.

Theme 2: Personalized Recommendations: This theme highlights generative AI's role in providing hyper-personalized product and promotion recommendations to boost customer experience and in turn revenues for SMEs.

Subtheme 2.1. Customized Promotions: By studying each customer's transaction history and behavior, generative AI models can create tailored discounts and offers enhancing response rate.

"Small retailers can use our AI solutions to take the guesswork out of managing dynamically changing demand and inventory through accurate demand forecasting, pricing optimization and promo planning." (Admin & Admin, 2024)

Subtheme2.2. Tailored Product Offerings: Generative AI tools can generate individualized product recommendations matching the preferences of customers. This level of personalization improves customer experience.

Subtheme2.3. Individualized Marketing Campaigns: AI facilitates highly customized marketing content including emails, web page layouts and ad displays personalized to micro-segments of customers ultimately driving engagement and sales.

Key challenges involve ensuring privacy protections and minimizing bias in datasets used to train AI recommendation algorithms.

Theme 3: Scenario Analysis: This theme relates to SMEs leveraging generative AI solutions for envisioning and analyzing alternative future scenarios driven by forces of change like technology disruptions.

Subtheme3.1. Strategic Scenario Planning: Generative AI tools can rapidly process trends and uncertainties that small businesses may face to construct relevant hypothetical scenarios for strategic analysis.

" Conduct scenario analysis rapidly to stress test your business plans against a range of potential disruptions from supply chain risks to new competitors..." (Generative AI for Mid-Sized Enterprises - Mountain Moving Co, n.d.)

Subtheme3.2. Simulations of Future Scenarios: AI systems can generate detailed simulations reflecting the impact of different scenarios on business metrics like costs, revenues, and operations.

Subtheme3.3. Contingency Strategy Development: By analyzing various scenarios, small businesses can use AI to develop contingency strategies and plans to address emerging situations and adapt quickly.

Key barriers in deployment involve AI skill gaps within companies and inheriting biases present in the data used for analysis.

Theme 4: Risk Management: This theme indicates how generative AI can enable small businesses to identify and respond to organizational risks systematically.(Marc_the-Admin, 2023)

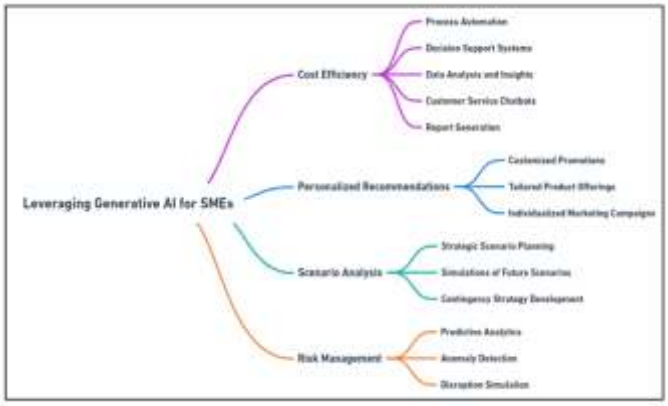
Subtheme 4.1.Predictive Analytics: By extrapolating patterns in supply chain operations data, generative AI can forecast potential disruptions and mitigate risks through early warnings.

"Can AI solutions help SMEs simulate potential supply chain disruptions and alert us to take preemptive actions?" (AI Business TV, 2023)

Subtheme 4.2. Anomaly Detection: Analyzing real-time data from sensors, IoT platforms etc. using AI can rapidly detect abnormalities or events indicating emerging risks. This allows for quicker interventions.

Subtheme 4.3. Disruption Simulation: Generative AI leverages computational models to simulate a range of disruption scenarios and their business impacts to aid contingency planning for improved risk preparedness.(Hewlett Packard Enterprise, 2023)

Fig1: Thematic Map for Generative AI for SMEs



Conclusion:

The purpose of this study was to investigate the transformative potential of generative artificial intelligence for strategic planning and scenario analysis in small enterprises that are confronting disruptions brought about by industry 5.0. The study has offered a comprehensive understanding of the aspects that influence the adoption of artificial intelligence by applying the technology organization environment (TOE) paradigm. According to the findings, generative artificial intelligence considerably improves the statistical skills of small enterprises by giving enhanced tools for scenario building, story exploration, and the generation of I am strategies. The incorporation of air technology makes it possible for small enterprises to navigate settings that are both complicated and dynamic in a more efficient manner, so maintaining their resilience and competitiveness.

Limitations and Future Scope: The research lightly realize heavily on qualitative data. Incorporating more quantitative data could provide a more robust analysis of the impact of generative AI.

Future research can conduct longitudinal studies to examine the long term impacts of generative AI adoption on small businesses strategic planning processes and overall performance. This will provide depos inside into the sustainability of AI driven strategies. Comparative studies between small businesses and large enterprises in terms of AI adoption and strategic planning effectiveness can offer valuable and size into the scale ability and adaptability of AI technology across different organization sizes and sectors.

Implications:

Theoretical Implications:

Advancement in AI Adoption Models: This research fills a research gap by providing empirical support for the Technology-Organization-Environment (TOE) framework, and utilizing it to understand how small firms implement generative artificial intelligence. It also draws on resources from the Dynamic Capabilities theory to show how small organizations can enhance their strategic agility by putting generative artificial intelligence to use.

Contribution to Scenario Planning Theory:By applying generative AI to targeted scenario analysis in small firms, a new variation on the concept of scenario planning is demonstrated. More importantly, it shows how technological developments of the recent past might complement traditional approaches, enabling the production and analysis of scenario information that is richer and faster, and making a useful contribution to what is currently known about the development of strategic

planning tools and the application of those tools in dynamic and resource-constrained settings.

Managerial Implications:

Enhanced Decision Making: Generative AI helps small business managers make more evidence-based and scalable decisions. It could assist them in identifying more efficiently potential risks and opportunities. The ability to simulate and analyses a range of scenarios can also foster improved strategic management success. The key implications of this research for managers who want to integrate generative AI to improve strategic management processes and business performance are: - First, set a clear problem definition that needs to be addressed by the AI tool. - Second, identify the type of model that needs to be constructed to support the ethical problem within a given timeframe and be unsure of a specific technique to generate the dataset.

Resource Allocation: As long as managers have a better understanding of the technological, organizational and environmental dimensions that underpin the systemic deployment of generative artificial intelligence, they should be able to deploy resources better: what should be invested in and when? The paper rightly stresses the importance of ecosystemic alignment. This should guide what we invest into infrastructure, into training, and into technology.

Generative artificial intelligence initiatives need to be linked to a company's strategic goals, and there needs to be strong leadership support for them, according to the researchers' findings.

Social Implications:

Workforce Skills and Training:Generative AI can also require the updating, skills refresh and retraining of workers. As a way forward, it is important to focus on continued learning and development as those new roles and competences can emerge.

The research shows that managers should invest in training for staff to help them apply and interpret insights generated by AI.

Ethical Considerations:Use of generative AI poses questions of ethics, such as data privacy, bias, and job displacement, and managers need to recognize and proactively manage these challenges, ensuring that artificial intelligence is put to use for good. So then what becomes of our capacity to make decisions? As explored through the research discussed, the ability of artificial intelligence to automate decisions can be viewed more positively when processes include greater openness, accountability and human oversight.

Policy Implications:

Regulatory Frameworks:The study highlights the need for legislative frameworks that provide solutions to the ethical, privacy and security issues that arise from the deployment of generative artificial intelligence. It is the duty of policymakers to develop standards that allow artificial intelligence to flourish in a safe manner, taking into account the developments and potential blockers for small companies, and providing stimuli to enable the implementation of artificial intelligence.

Government Support:The government can play a role encouraging the use of generative artificial intelligence in SMEs through grant funding for research and development, provision of training and education, and financial incentives for adoption of artificial intelligence. These policies should aim to create an environment conducive to innovation and offering support to small businesses in their digital transformation.

Industries Standard:Industry standards for artificial intelligence can help small businesses in the use of generative AI by giving them guidance on best practices, data governance and ethical issues. Strong and applicable rules for the deployment of artificial intelligence can be strengthened through collaboration of industry, universities and policymaking. When these theoretical, managerial, social, and policy implications are taken into consideration, small businesses have the ability to effectively harness the potential of generative artificial intelligence for strategic planning and scenario analysis. This results in an enhancement of their ability to navigate the disruptions brought about by industry 5.0 and thrive in an environment that is dynamic for business.

References

Admin, & Admin. (2024, April 22). *How Generative AI for Business Enhances Productivity and Growth*. Rishabh Software. https://www.rishabhsoft.com/blog/generative-ai-for-business.

AI Business TV. (2023, December 15). *Transforming business with generative AI* [Video]. YouTube. https://www.youtube.com/watch?v=KxUd-uIefm4

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.

Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. W. W. Norton & Company.

Drever, T. (2024, April 4). Small Businesses Growth with Generative AI | Pure IT. *Pure IT Calgary*. https://www.pureit.ca/how-small-businesses-are-unlocking-growth-with-generative-ai/.

Generative AI for mid-sized enterprises - Mountain Moving Co. (n.d.). https://www.mountainmoving.co/insights/generative-ai-for-mid-sized-enterprises.

Goodfellow, I., Pouget-Abadie, J., Mirza, M., Xu, B., Warde-Farley, D., Ozair, S., ... & Bengio, Y. (2014). Generative adversarial nets. In *Advances in neural information processing systems* (pp. 2672-2680).

Hewlett Packard Enterprise. (2023, June 22). *Generative AI: Disruptions and implications for enterprises and society* [Video]. YouTube. https://www.youtube.com/watch?v=8ilVyjg1DNk.

How Generative AI changes strategy. (2023, May 25). Harvard Business Review. https://hbr.org/podcast/2023/05/how-generative-ai-changes-strategy.

If you don't have a Generative AI strategy it's time to get one. (n.d.). DXC Technology. https://dxc.com/in/en/insights/perspectives/article/time-for-a-generative-ai-strategy.

Isguzar, S., Fendoglu, E., & SimSek, A. I. (2024). Innovative Applications in Businesses: An evaluation on Generative Artificial intelligence. *Amfiteatru Economic*, *26*(66), 511. https://doi.org/10.24818/ea/2024/66/511

Kaplan, A., & Haenlein, M. (2019). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business Horizons*, 62(1), 15-25.

Kozinets, R. V. (2015). *Netnography: Redefined*. Sage.

Marc_the-Admin. (2023, October 12). Demystifying Generative AI: A Comprehensive Guide for Business Owners – SmartFox Group. *SmartFox Group*. https://www.smartfox.group/en/generative-ai-guide-for-business-owners/

Pamungkas, M. R. S. P., Asyivadibrata, A., Susilawati, T., & Huda, M. N. (2023). Unleashing the Potentials of Artificial intelligence for micro, small, and medium Enterprises: A Systematic Literature review. *Jurnal Teknologi Dan Sistem Informasi Bisnis/Jurnal Teknologi Dan Sistem Informasi Bisnis*, *5*(3), 303–310. https://doi.org/10.47233/jteksis.v5i3.860.

Radford, A., Wu, J., Child, R., Luan, D., Amodei, D., & Sutskever, I. (2019). Language models are unsupervised multitask learners. *OpenAI Blog*, 1(8), 9.

Rajaram, K., & Tinguely, P. N. (2024). Generative artificial intelligence in small and medium enterprises: Navigating its promises and challenges. *Business Horizons*. https://doi.org/10.1016/j.bushor.2024.05.008

Reznikov, R. (2024). LEVERAGING GENERATIVE AI: STRATEGIC ADOPTION PATTERNS FOR ENTERPRISES. *MODELING THE DEVELOPMENT OF THE ECONOMIC SYSTEMS*, *1*, 201–207. https://doi.org/10.31891/mdes/2024-11-29

Rojko, A. (2017). Industry 4.0 concept: Background and overview. *International Journal of Interactive Mobile Technologies (iJIM)*, 11(5), 77-90.

Schoemaker, P. J. H. (1995). Scenario planning: A tool for strategic thinking. *Sloan Management Review*, 36(2), 25-40.

Sharma, S., Kylas, & Sharma, S. (2024, June 19). *How can Generative AI help your business operations?* Kylas Growth Engine | Sales CRM Software for Small Businesses. https://kylas.io/blog/generative-ai-business-operations.

Xu, M., David, J. M., & Kim, S. H. (2018). The fourth industrial revolution: Opportunities and challenges. *International Journal of Financial Research*, 9(2), 90-95.