Technology Adoption In Small Business Management

Komal Kanojia[1]

Assistant professor, Department of Commerce and Management

OPEN ACCESS

Volume: 3

Issue: 4

Month: December

Year: 2024

ISSN: 2583-7117

Published:28-12.2024

Citation:

Komal Kanojia, Technology Adoption In Small Business Management, International Journal of Innovations In Science Engineering And Management, vol. 3, no. 4, 2024, pp.72-79

DOI

10.69968/ijisem.2024v3i472-79

Abstract

Small enterprises (business) play a significant role in driving economic growth and development. However, their growth is often hindered by slow technology adoption, despite its strong association with improved economic performance. The adoption process is frequently challenged by market failures, financial constraints, and other barriers, making external interventions necessary to facilitate the integration of emerging technologies. A review of existing literature highlights that the primary obstacles for Small enterprises (business) include limited access to financing and a lack of digital literacy among business owners. To address these challenges, a collaborative effort is essential. Policymakers need to create supportive frameworks and funding opportunities, technology providers must offer affordable and accessible solutions, and community leaders should foster awareness and education. Small enterprises (business) owners themselves should actively seek opportunities to enhance their digital skills. Together, these efforts can empower small enterprises (business) to harness technology effectively, driving innovation and ensuring their long-term sustainability.

Keyword: Technology Adoption, Small Business Management

I. INTRODUCTION

One of the most often debated subjects in the literature on technology adoption, particularly in industrialised nations, particularly those in North America and Europe. However, the dynamic surrounding the tendency has been noticeable in emerging nations in "Asia, Africa, and Latin America" in recent years. The many benefits that modern technologies provide are mostly to guilt for this desire [1]. It is widely accepted that technology helps companies and, by extension, the whole economy in a number of ways. Technology has much more potential to help emerging economies [2]. It is well acknowledged that ICTs contribute to the success of small businesses and, therefore, to economic expansion [3]. According to the same source, new technologies also make knowledge more accessible, provide new ways to communicate, change the way things are made, and make many business procedures more efficient [4].

A. Benefits of adopting new technology

Adoption of technology in company may be crucial to its expansion, regardless of its size, nature, and clientele. Examining closely how current technology satisfies the business's requirements is the key. Understanding if the present technology can improve the business and whether the moment is opportune to invest are also important [5], [6]. These are five advantages of using modern technology in your company.

1. Better efficiency

Many online surveys show that inefficient technology hurts startups and enterprises, especially during pandemics. 90% of recent survey respondents indicated they needed many channels to understand their customers. These may result in a detrimental effect on the performance of the firm during that period. Technology may expedite procedures by providing more adaptable methods of

completing tasks. The introduction of cloud computing, CRM programs, "Enterprise Resource Planning (ERP) software", and other tools may improve customer and corporate management. It may also assist with monitoring and evaluating performance to improve goal attainment. An improvement in performance and overall efficiency may result from the proper deployment of such systems.

2. Competitive edge

Digital transformation is necessary for companies to stay ahead. AI, Blockchain, and Big Data are popular among entrepreneurs. Innovative technology may help businesses stand out, boost revenue, and provide value to customers. Additionally, it positions them in front of their clients and investors as risk-takers and innovators, which opens up new avenues for expanded market reach and increased funding. Clients begin to see them as superior options for collaboration. Additionally, a firm may benefit from increased goodwill as a result.

3. Remote work challenges

Since COVID-19, many companies have prioritised survival. One of their biggest worries is managing remote workers. IT is a worldwide leader in remote work since most companies operate remotely. However, the difficulties brought on by the epidemic are making it difficult for a sizable portion of enterprises to thrive. Investment in communication and collaboration tools may ease the remote job shift. Technology may help distant businesses improve communication, cooperation, and chore digitisation. Microsoft's usage of Microsoft Teams to facilitate communication and connections among its workers, despite their hundreds of miles away, is a great example.

4. Robust workflows

Businesses may improve time management and efficiency by integrating interdependent processes and automating operations via workflows. "Marketing, onboarding, ad campaigns, purchase and sale, reimbursements", and other activities may all benefit greatly from automated workflows created with the use of technology. Companies may simplify processes and go on with operations even during these unpredictable times by putting in place a workflow management system. Process simplification, faster turnaround, and less human labour are the main goals of these systems.

5. Positions for future growth

In this dynamic climate, a startup or firm can only survive via innovation. It involves establishing the course that a firm should follow and shaping the future. To improve products and services, technology should provide firms new and improved systems. By doing so, they will be able to guarantee greater client happiness, lower manufacturing times, and raise quality standards.

B. Technology acceptance model (TAM)

"Technology acceptance model (TAM)" information systems theory mimics technology adoption and utilisation. Technology is used by people during system use. Individuals are motivated to use technology in part by their behavioural intentions [7]. "The behavioural intention (BI)" is influenced by the attitude (A), or overall perception of the technology.

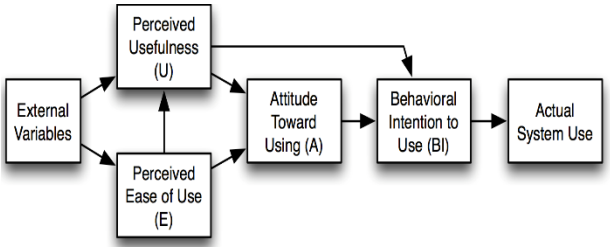

Figure 1 Technology acceptance model (TAM)

C. Diffusion of Innovation theory (DOI)

Explaining how, why, and how rapidly a technique, service, or product spreads across a community or social system is the aim of the Diffusion of Innovation (DOI) theory, which was popularised by "American sociologist and communication theorist Everett Rogers in 1962" [8]. Diffusion of innovation, in other words, explains the rate at which new ideas and technology spread. "The diffusion of innovation theory" is a common tool used by marketers to estimate the rate at which consumers would embrace a new product or service [9].

A social system's members do not all adopt a new idea, service, or product at once; it is not a sudden occurrence. According to research, consumers who adopt innovations sooner have different characteristics than those who do so later [10]. Consequently, it is essential for marketers to understand the characteristics of each industry that might either help or hinder the adoption of an invention [11]. There are five types of adopters according to "the diffusion of innovation theory":

- **Innovators:** characterized by those who want to test the invention first.
- **Early Adopters:** defined by people who embrace new ideas and are at ease with change.
- **Early Majority:** marked by those who embrace new ideas before the general public. But before this group would embrace the idea, proof that it is effective is required.

- **Late Majority:** People in this category are known for being reluctant to change and waiting for the great majority of people to adopt an idea before doing so themselves.
- **Laggards:** Those that are most conservative and traditional tend to be the last to adopt new technology. Appealing to this segment is the most difficult.

Rogers' five adopter classes are spread as follows, as seen in **Figure 2**: This group is made up of 2% innovators, 13.5 percent early adopters, 34.4 percent early majorities, 34 percent late majorities, and 16 percent laggards. The laggards group is far bigger than the innovators category, which is at the other extreme of the range.

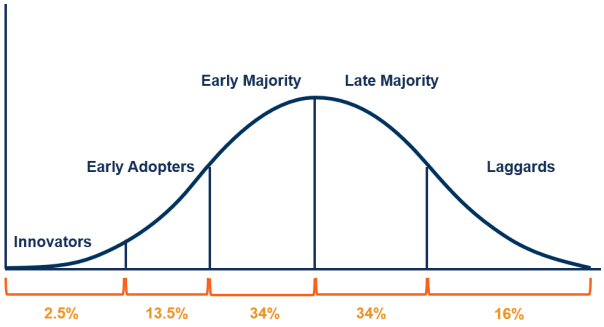

Figure 2 Distribution of adopter categories according to Rogers.

D. Unified theory of acceptance and use of technology (or UTAUT)

In the essay, Venkatesh and associates created "the unified theory of acceptance and use of technology (UTAUT)", aparadigm for technological adoption. Information technology user acceptance: Moving towards a common perspective. The UTAUT aims to explain why users choose to use a database and how they utilise it thereafter. According to the theory, performance expectation, effort expectancy, social influence, and enabling circumstances are the four main constructs [12].

While usage intention and conduct are directly determined by the first three, the fourth directly influences user behaviour. The four primary components' impact on use intention and conduct is believed to be modified by "age, gender, experience, and voluntariness of use". Eight models that had been used in earlier research to explain the behaviour of information systems users were reviewed and consolidated in order to develop the theory: "the diffusion of innovations theory, the theory of reasoned action, the theory of planned behaviour, the motivational model, the model of personal computer use, a combined theory of planned behavior/technology acceptance model, the social cognitive theory, and the technology acceptance model". According to a longitudinal study subsequently verified by Venkatesh et al. (2003), UTAUT explains around 70% of the variation in "behavioural intention to use (BI)" and 50% of the variation in actual use [12].

E. Key factors influencing technology adoption

1. Relative advantage

An innovation will be adopted more widely if it is seen to be superior than the alternative solution it replaces. Quantifying the relative benefit might be done using economic reasons (the new technology is less costly than the old, or costlier but more powerful), convenience factors (messaging is faster than writing letters and travelling to the post office), or status elements (I need this product to seem cool). It is rare for a new product to have no alternatives, like watching films on demand rather than leasing DVDs from a shop or utilising digital cameras rather than analogue ones. For this reason, relative advantage is crucial. Rapid spread, however, cannot be guaranteed by relative excellence alone; the market is crowded with great inventions that failed, like the Dvorak keyboard and "the Betamax or Video 2000 video recorder" [13].

2. Compatibility

Compatibility is a concept that quantifies the extent to which an invention is consistent with "the values, norms, and other cultural or religious" characteristics that are prevalent in the population. This also holds true for issues with naming: a product that has the wrong name or colour combination is not well suited to a society where these attributes have specific meanings.

3. Complexity

Complexity is the degree to which an invention is seen as difficult to implement in real life, whether due to an unintuitive user interface or the need for too many sequential procedures, such as taking a medication every hour or ten times a day. Well-thought-out solutions that integrate hardware and software, like the iPod and the iTunes application, may have a major competitive advantage in this market since each component is easy to use on its own and has been carefully built to connect with the others.

4. Triability

The capacity to test a novel concept in a controlled environment is known as triability. Barriers to entry are reduced for customers, especially those who arrive late. Triability may convince risk-averse people who might otherwise put off implementing the technology because they

aren't sure whether it will suit their requirements or be superior to the present approach. In order to encourage their consumers to use the service, some telecom providers, for instance, provide new services, such as limitless mobile TV access, for free while the first launch phase.

5. Observability

Inventions having a lower "degree of observability" will circulate more slowly than others because visible inventions will promote themselves. These may be developments that are exclusively utilised inside rather than outside, or they may have been given less shelf space than other items.

F. Emerging technologies in small business management

As a result of the constant advancements in technology, companies are always finding new applications for it. There are a number of possibilities that modern technologies provide you to think about, whether your objective is to increase the capabilities of your company or make your present business operations quicker and simpler [10]. Let us now go over a few of them.

1. ***Artificial Intelligence (AI):*** Innovation in business is fuelled by AI. Thanks to developments in "machine learning, natural language processing, and large language models (LLMs), small firms" may use AI for predictive analytics and customer care bots, precisely customising services to match consumer wants.
2. ***Internet of Things (IoT):*** Small businesses may collect data and automate procedures by using "the Internet of Things" to link sensors and devices. Smart workplace settings that optimise energy consumption and operations are made possible by smart home integration, where networked gadgets provide efficiency and ease.
3. ***Blockchain Technology:*** The uses of blockchain technology go beyond cryptocurrencies to include smart contracts. This eliminates the need for middlemen and builds confidence with clients and partners by giving small companies safe, transparent means to automate agreements and perform transactions.
4. ***Cloud Computing:*** Access to sophisticated computer resources has become more accessible thanks to cloud computing. "Software as a Service (SaaS), Infrastructure as a Service (IaaS), and Platform as a Service (PaaS)" are examples of service models that allow small businesses to grow flexibly and only pay for what they use. As a result, there is less need for large upfront expenditures on IT infrastructure. Cloud computing is used by a small retail company to handle sales and inventory information across many locations. They may access real-time data, optimise processes, and improve client satisfaction by using a platform like as Shopify.
5. ***Privacy & Cybersecurity*:** For small firms, cybersecurity and privacy work together to provide an essential defence. It's about protecting and handling consumer data with the highest respect, and it extends beyond compliance. To preserve trust and guarantee company resilience, small firms must implement complete cybersecurity measures, such as "endpoint security, network security, and data encryption", as digital hazards increase. To safeguard consumer transactions, a small e-commerce business can, for instance, use secure payment processing and frequent security assessments. By doing this, they strengthen their company against cyberattacks, adhere to privacy regulations, and establish a reputation for dependability and security. When combined, cybersecurity and privacy provide small companies a powerful barrier in the digital sphere.
6. ***Digital Marketing:*** To increase brand exposure and attract new clients, digital marketing is crucial. Small companies may improve their online presence and draw in a specific audience at a reasonable cost by using strategies like content marketing, SEO, and social media advertising. The rise in the power of digital marketing is caused by a number of causes. AI's incorporation into social media, which simplifies and personalises consumer interaction, is one of them. Consumer expectations are also influenced by new platforms, data privacy, and environmentally responsible behaviours. These trends are used by small companies to create authentic, captivating marketing stories that connect with consumers and encourage growth and loyalty.
7. ***Remote Work Tools:*** To maintain team cohesion and productivity while working remotely, project management systems, "video conferencing software", and communication tools are crucial. Slack and Zoom, for instance, may be used by small businesses to enable remote team collaboration and communication, guaranteeing project efficiency and continuity.
8. ***Business Intelligence:*** Business intelligence technologies convert unprocessed data into insights that may be put to use. Predictive analytics, performance dashboards, and data visualisation help small firms make well-informed choices that promote efficiency and growth. Tableau and other business

intelligence tools are useful for small organisations, such as boutique marketing agency, to analyse campaign performance data. This helps customers make better ROI choices based on facts.

9. ***E-commerce Solutions:*** For a smooth shopping experience and efficient operation management for small firms, e-commerce solutions such as CRM software, inventory management systems, and online payment gateways are essential. Etsy allows small companies, such as handmade soap producers, to handle orders, process payments, and reach a worldwide audience—all of which may greatly boost sales and clientele.
10. ***Sustainability Initiatives:*** By 2024, small firms will be at the leading edge of sustainability, combining cost-effective eco-friendly activities with sustainable strategies including energy audits, regenerative supply chains, and paperless systems. The situation was as follows: an organic café in California reduced its environmental footprint and became a model for sustainable business practices by implementing a zero-waste attitude, local sourcing, and renewable electricity. By meeting customer and regulatory objectives, this strategy sets the company apart and shows that sustainability is both a competitive benefit and an ethical requirement.

II. LITERATURE REVIEW

(Barkley & Jokonya, 2024) [14] Therefore, investigating the variables influencing SMEs' adoption of information technology (IT) in developing nations was the aim of the research. The factors impacting developing countries' adoption of new technology were investigated using the Technological-Organizational-Environmental (TOE) paradigm. The results of the research show that SMEs' lack of money and digital literacy have the most effects on their adoption of new technologies. The research adds to the body of information about the variables influencing ICT adoption by SMEs in developing nations.

(Kallmuenzer et al., 2024) [15] SMEs' decision-makers often struggle with the unknowns of the digitalisation process, which makes them reluctant to use the technologies that are accessible. By examining the factors that encourage and hinder SMEs' adoption of digitalisation and evaluating its effects on performance, this qualitative research aims to solve this issue. The results of deep conversations with managers of SMEs indicate that a variety of factors, including the right technology and employees who possess the digital skills to use it, facilitate the digitisation of SMEs. However, we also discovered that many SMEs have a risk-averse mindset and rely on outdated legacy systems, which are barriers to digitisation. In conclusion, our study emphasises how crucial it is for these components to interact strategically in order for SMEs to successfully digitise. The complexities of the digitalisation process are clarified by this research, which also offers insightful information on the variables affecting its uptake and the performance results that follow in the context of SMEs.

(Sichoongwe, 2024) [16] This research examines South African industrial enterprises' digital technology usage. According to the probit results, capital ownership has a favourable impact on current adoption of digital technology, while company innovation and scale have an impact on both current and projected adoption. Digital infrastructure and exports have a big impact on the use of digital technology in customer relations business functions. Product development, customer relations, and supplier relationships all exhibit a persistency pattern, according to the transition probability matrix. Product development is more persistent than other firm business tasks. Regulations should provide institutional and systemic support, facilitate easy access to basic digital tools, and foster business innovation in order to encourage businesses to embrace digital technology.

(Radicic & Petković, 2023) [17] Digitalisation affects technical (product and process) advancements in German SMEs, according to this research. "Digital value chains, big data analytics", and manufacturing and logistics digitalisation are examined. German industrial and service SMEs from "the Mannheim Innovation Panel (MIP)" are used in the empirical investigation. To examine if digitalization's positive innovation impacts occur in SMEs of various sizes, a binary probit model is calculated for micro, small, and medium-sized enterprises. Digitalisation affects innovative activities differently in SMEs, according to empirical research. The study also looks at the moderating impact of internal R&D. The findings indicate that internal R&D reduces the inventive effect of digitalisation. Innovations in processes and products are positively impacted by digitalisation in non-R&D SMEs, but not in R&D SMEs. The paper suggests theoretical and policy consequences from these results.

(Khaund & Nath, 2023) [18] Industrial progress relies on small firms. One of the greatest challenges for small businesses is competing with bigger ones. Small businesses lack IT benefits, which contributes to this disadvantage. Most of these businesses don't utilise IT, which hurts their performance and survival. To compete, businesses need

strong IT infrastructure. A mechanism offers the correct information at the proper time and place. As corporate usage of IT expands, small enterprises must integrate IT-enabled services quickly. Business management uses information systems. Small businesses still have IT implementation issues. This article discusses the primary benefits of installing and using IT in small businesses.

(Baciu-David et al., 2023) [19] Technology's rapid growth has presented company management issues from both an individual and organisational standpoint. The expense of investment, aversion to change, and difficulty of integrating new technology with current systems and procedures might impact organisational system adoption. An examination of how organisations and managers may effectively manage technology uptake and workforce adaptability. The qualitative study uses epistemological interpretivism. An expert interview research used semi-structured interviews and Gioia coding analysis. A loop model of IT adoption is the result of the study. The report highlights technological transition problems such "employee resistance and communication". It emphasises the need of managers and their communication, field experience, and leadership abilities to handle such difficulties. The research explores IT adoption value generation.

(Mishrif & Khan, 2023) [20] The COVID-19 epidemic has severely impacted small and medium businesses (SMEs) worldwide, compelling many to adopt technology and creativity instead of conventional techniques. The COVID-19 epidemic has affected SMEs in the logistics and supply chain industry worldwide, however this research focusses on Oman. Prior to, during, and after COVID-19, there is a substantial correlation between the use of technology. Adoption of technology has helped SMEs weather the pandemic, and SMEs with a high level of digitisation are more likely to employ industry 4.0 technologies. Company leaders should understand the need of embracing innovation and technological solutions to maintain competitiveness, and policymakers should use the results to guide investments in digital infrastructure that will speed up digital transformation.

(Juniarti & Omar, 2021) [21] Small and medium-sized enterprises (SMEs) contribute significantly to the economy. Adoption of technology is thus essential to SMEs' growth. An review of the literature on the use of technology by SMEs is the aim of this study. Peer-reviewed journal articles (systematic review) that discussed "technology adoption in SMEs" were identified and evaluated for this study based on study articles published during 2011 and 2021. The literature study demonstrates significant advancements in the field being discussed. Insightful research directions for future studies on the use of technology in SMEs and practitioner groups are suggested by the study.

(Kalumendo, 2022) [22] Every year, new technologies affect information system deployment in organisations. In developing countries, especially the Democratic Republic of the Congo (DRC), small and medium-sized businesses (SMEs) are gradually digitising their information systems. This study sought to understand the benefits of digitalisation in the DRC. Data was collected from 119 SMEs that had used information system technology for two years. Pearson's correlation and descriptive statistics were used to evaluate the data. According to the research, SMEs' organisational system performance—including financial reporting, time management, paperwork, profit, and information quality—is enhanced by technology. The findings show that companies gain more from technological investments.

(Mohtaramzadeh et al., 2018) [23] This research investigates how organisational culture influences the adoption of business-to-business electronic commerce (B2B EC) by moderating the effect of the technology-organization-environment (TOE) framework. In a poll, 320 Iranian industrial managers and owners responded. Cost, top management support, competitive pressure, and government backing influenced B2B EC adoption in manufacturing enterprises, and organisational culture adversely moderated the connection between upper management support and B2B EC adoption. These insights may help managers, owners, and policymakers implement B2B EC. The findings show that the TOE paradigm is viable for studying B2B EC in emerging nations. These findings also demonstrate that this paradigm may include moderating variables into theoretical models.

III. CONCLUSION

The adoption of emerging technologies such as blockchain, IoT, and AI offers SMEs unprecedented opportunities for efficiency, innovation, and market expansion, with significant implications for sustainability, competitiveness, and ongoing innovation. Adoption of technology is, however, hampered by obstacles such a lack of funding and digital proficiency, especially in underdeveloped nations. Addressing these challenges requires collaborative efforts from policymakers, technology providers, community leaders, and SMEs themselves. Key measures include providing funding opportunities, implementing digital literacy programs,

fostering innovation, and ensuring transparent legal frameworks to enhance data protection and cybersecurity. This collective approach can create a more equitable and technologically advanced SME sector that benefits communities and economies. According to the research, using technology enhances organisational performance, which raises financial reporting, reduces paperwork, maximises time management, and increases information quality. Crucially, the results demonstrate a positive relationship between the amount of money spent on technology and the advantages obtained, highlighting the need of giving technological integration top priority in small enterprises.

IV. REFERENCES

[1] S. Z. Zamani, "Small and Medium Enterprises (SMEs) facing an evolving technological era: a systematic literature review on the adoption of technologies in SMEs," *Eur. J. Innov. Manag.*, vol. 25, no. 6, pp. 735–757, 2022, doi: 10.1108/EJIM-07-2021-0360.

[2] P. Alford and S. J. Page, "Marketing technology for adoption by small business," *Serv. Ind. J.*, vol. 35, no. 11–12, pp. 655–669, 2015, doi: 10.1080/02642069.2015.1062884.

[3] T. H. Nguyen, M. Newby, and M. J. Macaulay, "Information technology adoption in small business: Confirmation of a proposed framework," *J. Small Bus. Manag.*, vol. 53, no. 1, pp. 207–227, 2015, doi: 10.1111/jsbm.12058.

[4] A. M. Selase, A. E. Selase, A.-R. Ayishetu, A. D. Comfort, A. Stanley, and G.-A. Ebenezer, "Impact of Technology Adoption and Its Utilization on SMEs in Ghana," *Int. J. Small Mediu. Enterp.*, vol. 2, no. 2, pp. 1–13, 2019, doi: 10.46281/ijsmes.v2i2.382.

[5] O. Al-Hujran, E. M. Al-Lozi, M. M. Al-Debei, and M. Maqableh, "Challenges of cloud computing adoption from the TOE framework perspective," *Int. J. E-bus. Res.*, vol. 14, no. 3, pp. 77–94, 2018, doi: 10.4018/IJEBR.2018070105.

[6] Z. Arifin, Firmanzah, A. Fontana, and S. H. Wijanto, "The determinant factors of technology adoption for improving firm's performance: An empirical research of Indonesia's electricity company," *Gadjah Mada Int. J. Bus.*, vol. 18, no. 3, pp. 237–261, 2016, doi: 10.22146/gamaijb.16898.

[7] D. Alfaro-Serrano, T. Balantrapu, R. Chaurey, A. Goicoechea, and E. Verhoogen, "Interventions to promote technology adoption in firms: A systematic review," *Campbell Syst. Rev.*, vol. 17, no. 4, 2021, doi: 10.1002/cl2.1181.

[8] T. Brink, "B2B SME management of antecedents to the application of social media," *Ind. Mark. Manag.*, vol. 64, pp. 57–65, 2017, doi: 10.1016/j.indmarman.2017.02.007.

[9] M. Bressler and L. Bressler, "a Study of Small Business Technology," no. October, 2015.

[10] P. Satsangi, Kanika, S. Chaudhary, and S. Dewakar, "Emerging Technology in Business and Finance," *Integr. J. Res. Arts Humanit.*, vol. 3, no. 2, pp. 93–102, 2023, doi: 10.55544/ijrah.3.2.16.

[11] L. Rao, "Emerging Trends in Business Old Businesses Will Change and New Businesses Will Emerge," *Int. J. Nov. Res. Dev.*, vol. 7, no. 5, pp. 2456–4184, 2022, [Online]. Available: www.ijnrd.org

[12] V. Venkatesh, M. G. Morris, G. B. Davis, and F. D. Davis, "User acceptance of information technology: Toward a unified view," *MIS Q. Manag. Inf. Syst.*, vol. 27, no. 3, pp. 425–478, 2003, doi: 10.2307/30036540.

[13] C. Verma, K. S. Swarup, and P. Jain, "NEW TECHNOLOGY ADOPTION IN SMALL AND MEDIUM ENTERPRISES' (SMEs) OPERATIONS: A COMPARATIVE STUDY OF AUTO-PARTS, FOUNDRY AND LEATHER ENTERPRISES OF AGRA DISTRICT," 2022.

[14] E. Barkley and O. Jokonya, "Factors Affecting SMEs Emerging Technologies Adoption in Developing Countries: A Literature Review," *Procedia Comput. Sci.*, vol. 239, no. 2023, pp. 1966–1973, 2024, doi: 10.1016/j.procs.2024.06.381.

[15] A. Kallmuenzer, A. Mikhaylov, M. Chelaru, and W. Czakon, "Adoption and performance outcome of digitalization in small and medium-sized enterprises," *Rev. Manag. Sci.*, no. 0123456789, 2024, doi: 10.1007/s11846-024-00744-2.

[16] K. Sichoongwe, "Adoption Behaviour of Digital Technologies by Firms: Evidence from South Africa's Manufacturing Sector," *Glob. Bus. Rev.*, vol. 25, no. 2_suppl, pp. S244–S264, 2024, doi: 10.1177/09721509231190511.

[17] D. Radicic and S. Petković, "Impact of digitalization on technological innovations in small and medium-sized enterprises (SMEs)," *Technol. Forecast. Soc. Change*, vol. 191, no. December 2022, 2023, doi: 10.1016/j.techfore.2023.122474.

[18] M. Khaund and B. D. Nath, "a Study on Adoption of Information Technology in Small Enterprises," *IJRDO - J. Bus. Manag.*, vol. 8, no. 9, pp. 70–75, 2023, doi: 10.53555/bm.v8i9.5796.

[19] Y. Baciu-David, M. M. Polyhos, and G. Kumeto, "Title: Exploring the process of Information

Technology adoption, employee adaptation and the role of management in this transition," no. May, 2023.

[20] A. Mishrif and A. Khan, "Technology adoption as survival strategy for small and medium enterprises during COVID-19," *J. Innov. Entrep.*, vol. 12, no. 1, 2023, doi: 10.1186/s13731-023-00317-9.

[21] R. P. Juniarti and A. Omar, "Technology Adoption in Small and Medium Enterprises (SMEs) Current Issues and Future Research Avenues," *Proc. BISTIC Bus. Innov. Sustain. Technol. Int. Conf. (BISTIC 2021)*, vol. 193, no. Bistic, pp. 91–101, 2021.

[22] R. Kalumendo, "The Benefits of Technological Developments on Businesses: A Survey Conducted among SMEs in Beni, Democratic Republic of Congo," *Texila Int. J. Acad. Res.*, pp. 1–7, 2022, doi: 10.21522/TIJAR.2014.SE.22.01.Art012.

[23] M. Mohtaramzadeh, T. Ramayah, and C. Jun-Hwa, "B2B E-Commerce Adoption in Iranian Manufacturing Companies: Analyzing the Moderating Role of Organizational Culture," *Int. J. Hum. Comput. Interact.*, vol. 34, no. 7, pp. 621–639, 2018, doi: 10.1080/10447318.2017.1385212.