


**ASSESSING THE IMPACT OF TECHNOLOGICAL ADVANCES ON BUSINESS
MANAGEMENT TECHNIQUES**

**Manimohanraj Abirami^A, Syed Saleha Javed Abbas^B, Nazia Jamal^C, Anshuman
Magar^D, TVSS Swathi^E**



ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 31 March 2023</p> <p>Accepted 29 June 2023</p>	<p>Purpose: The purpose of this study is to examine the influence of technological advancement on business management techniques. The Theory of Digital Transformation is considered in order to have an in-depth understanding on technological advancement in business.</p>
<p>Keywords:</p> <p>Technological Advan Cement; Business Management; Communication; Operational Efficiency.</p> <div data-bbox="172 987 480 1234" style="text-align: center;">  </div>	<p>Theoretical framework: A primary quantitative research method is used to develop the study.</p> <p>Design/methodology/approach: The study graphical representation of the collected data in order to analyze respondents' opinions and interests. The need to undertake technological advances is deemed critical to formulate business management techniques.</p> <p>Findings: The study offers detailed analysis of advanced technological implications which complements organisational growth, understanding the effectiveness of technology and societal progress altogether.</p> <p>Research, Practical & Social implications: The value of the study is based on business strategies developed by the management to enhance their firm productivity through the introduction of technological advances.</p> <p>Originality/value: This research paper presents a unique perspective on the impact of technological advances on business management techniques, combining multiple theories and a mixed-methods approach to provide a comprehensive understanding of this complex relationship. The findings have implications for businesses, policymakers, and academics, offering valuable insights into the challenges and opportunities associated with technology-driven management practices.</p> <p>Doi: https://doi.org/10.26668/businessreview/2023.v8i7.1238</p>

**AVALIAÇÃO DO IMPACTO DOS AVANÇOS TECNOLÓGICOS NAS TÉCNICAS DE GESTÃO
EMPRESARIAL**

RESUMO

Objetivo: O objetivo deste estudo é examinar a influência do avanço tecnológico nas técnicas de gestão empresarial. A Teoria da Transformação Digital é considerada para se ter uma compreensão profunda do avanço tecnológico nos negócios.

^A Assistant Professor. PG & Research Department of Commerce, Sri Sarada College for Women. India.

E-mail: abisanjay2010@gmail.com Orcid: <https://orcid.org/0000-0002-0608-0609>

^B Assistant Professor. Department of Business Economics, HR College of Commerce and Economics, HSNC University. India. E-mail: yooshafaraz@gmail.com Orcid: <https://orcid.org/0000-0001-8782-7702>

^C Assistant Professor. Department of IMS, Second Campus, University of Lucknow. India.

E-mail: naziajamal786@gmail.com Orcid: <https://orcid.org/0000-0003-0937-0801>

^D Assistant Professor. Department of BMS, Model Degree College. India. E-mail: anshvm87@gmail.com

Orcid: <https://orcid.org/0000-0002-7349-5011>

^E Associate Professor. Department of Management Studies, Vardhaman College of Engineering. India.

E-mail: taddiswathi@gmail.com Orcid: <https://orcid.org/0000-0003-4250-4226>

Estrutura teórica: Um método de pesquisa quantitativa primária é usado para desenvolver o estudo.

Projeto/metodologia/abordagem: O estudo representa graficamente os dados coletados a fim de analisar as opiniões e os interesses dos entrevistados. A necessidade de realizar avanços tecnológicos é considerada fundamental para a formulação de técnicas de gerenciamento de negócios.

Conclusões: O estudo oferece uma análise detalhada das implicações tecnológicas avançadas que complementam o crescimento organizacional, compreendendo a eficácia da tecnologia e o progresso social como um todo.

Implicações sociais, práticas e de pesquisa: O valor do estudo baseia-se nas estratégias de negócios desenvolvidas pela gerência para aumentar a produtividade de sua empresa por meio da introdução de avanços tecnológicos.

Originalidade/valor: Este trabalho de pesquisa apresenta uma perspectiva única sobre o impacto dos avanços tecnológicos nas técnicas de gestão de negócios, combinando várias teorias e uma abordagem de métodos mistos para fornecer uma compreensão abrangente dessa relação complexa. Os resultados têm implicações para empresas, formuladores de políticas e acadêmicos, oferecendo percepções valiosas sobre os desafios e as oportunidades associadas às práticas de gestão orientadas pela tecnologia.

Palavras-chave: Avanço Tecnológico, Gestão Empresarial, Comunicação, Eficiência Operacional.

EVALUACIÓN DEL IMPACTO DE LOS AVANCES TECNOLÓGICOS EN LAS TÉCNICAS DE GESTIÓN EMPRESARIAL

RESUMEN

Objetivo: El objetivo de este estudio es examinar la influencia de los avances tecnológicos en las técnicas de gestión empresarial. Se considera la Teoría de la Transformación Digital para conocer en profundidad el avance tecnológico en las empresas.

Marco teórico: Para desarrollar el estudio se utiliza un método de investigación cuantitativo primario.

Diseño/metodología/enfoque: El estudio representa gráficamente los datos recogidos para analizar las opiniones e intereses de los encuestados. La necesidad de realizar avances tecnológicos se considera fundamental para la formulación de técnicas de gestión empresarial.

Conclusiones: El estudio proporciona un análisis detallado de las implicaciones tecnológicas avanzadas que complementan el crecimiento organizativo, la comprensión de la eficacia de la tecnología y el progreso social en su conjunto.

Implicaciones sociales, prácticas y de investigación: El valor del estudio se basa en las estrategias empresariales desarrolladas por la dirección para aumentar la productividad de su empresa mediante la introducción de avances tecnológicos.

Originalidad/valor: Este trabajo de investigación presenta una perspectiva única sobre el impacto de los avances tecnológicos en las técnicas de gestión empresarial, combinando diversas teorías y un enfoque de métodos mixtos para proporcionar una comprensión global de esta compleja relación. Las conclusiones tienen implicaciones para las empresas, los responsables políticos y el mundo académico, pues ofrecen valiosas perspectivas sobre los retos y oportunidades asociados a las prácticas de gestión impulsadas por la tecnología.

Palabras clave: Avance Tecnológico, Gestión Empresarial, Comunicación, Eficiencia Operativa.

INTRODUCTION

In recent years, the rapid development of technology has had a profound effect on the methods used to operate a firm. The corporate world has shifted drastically due to the introduction of cutting-edge technology such as artificial intelligence, automation, and others. These shifts offer new openings for organizations to boost productivity, enrich their interactions with customers, and ultimately, differentiate themselves in the marketplace. Yet, new difficulties, such as the need for different skill sets and higher cybersecurity concerns, have emerged as a result of these technical developments that organizations must now face. The

purpose of this research is to analyse how new technologies have altered conventional business management practices and offer suggestions for how companies might prosper in the face of these shifts. The research will look at how new technologies have altered fields of corporate management like advertising, production, and finance. The ultimate goal of this research is to shed light on the effect that technology has on business management and to recommend strategies that will help companies make the most of their investments in IT to advance their operations and boost their bottom line. Technology's proliferation has led to profound changes in the ways businesses are managed all around the world. Businesses in the modern era need to be flexible in order to survive in the cutthroat marketplace. Given the rate at which technology is developing, it is crucial to examine how it has altered conventional methods of corporate administration. The research here aims to measure how new technologies have altered conventional methods of running a firm. Operations management, marketing, financial management, human resources management, and strategic management will all be singled out for analysis because of the profound effects that technology progress has had on these facets of corporate management. This research will look into the pros and cons of new technologies in business management, the difficulties that companies experience when adopting them, and the ways in which these new technologies might be used to boost company output. The course will also investigate how the evolving role of technology in business is altering traditional notions of management and the duties of both managers and employees.

To evaluate the use of different technologies in business management

- To analyze the impact of advanced technologies on business management
- To explore the implementation of technological advancement in managing business

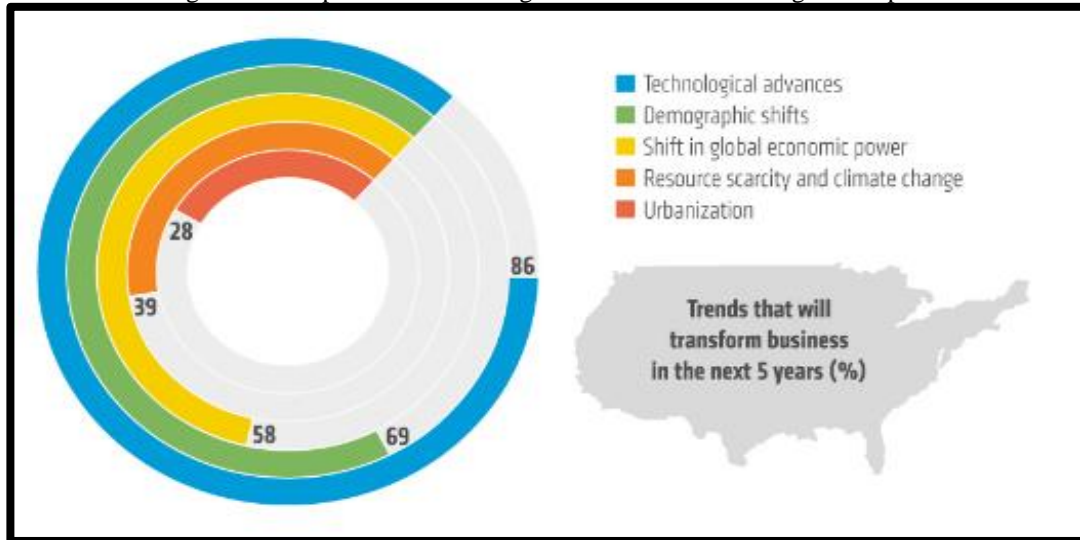
Incidents such as data theft and lack of proper cyber security strategies can cause severe damage to a company. Cyber attacks increase financial expenses and cause disruption of online transactions. On top of that, trading disruptions can results businesses in losing contracts and difficulty in managing activities (Sestino et al. 2020). Interruptions in daily operational activities lead to loss of revenue as well as damage to the reputation of a business.

LITERATURE REVIEW

With the emergence of advanced technologies, the business sector has uplifted its approach towards profitability and collaboration. Different communication tools such as video conferencing, email, and messaging channels have been effective in carrying out various

operations. In addition to this, digital marketing techniques have helped businesses to reach a wider section of the audience (Raut et al. 2019). Hence, upgraded technologies have been widely accepted by businesses to complete their tasks and increase productivity as shown in figure 1.

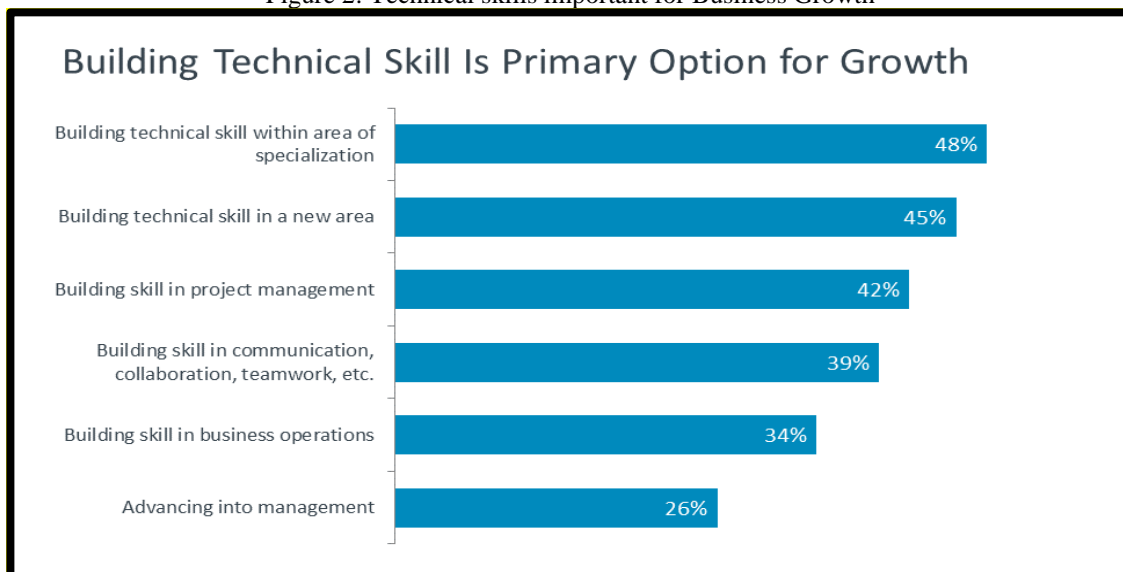
Figure 1: Acceptance of technological advancement in the global aspect



Source: Lim et al. 2020

Automation of business activities has significantly reduced travel costs as well as manual work. Businesses incorporating the latest technologies can are able to save money and have a competitive edge in the market (Lim et al. 2020).

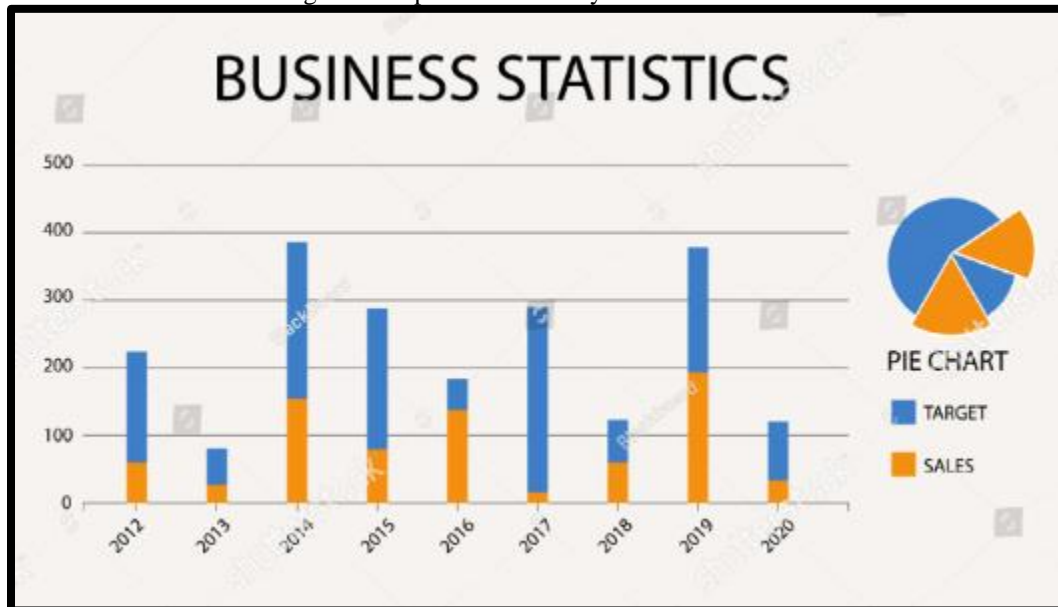
Figure 2: Technical skills important for Business Growth



Source: Ahlstrom et al. 2020

As presented in figure 2, it can be understood that businesses require employees with upgraded technical skills to improve their operational efficiency. Proficiency in software and database management is important to accomplish complex tasks and processes. However, a lack of a well-skilled workforce can reduce the effectiveness of advanced technologies.

Figure 3: Impact of data analytics on businesses



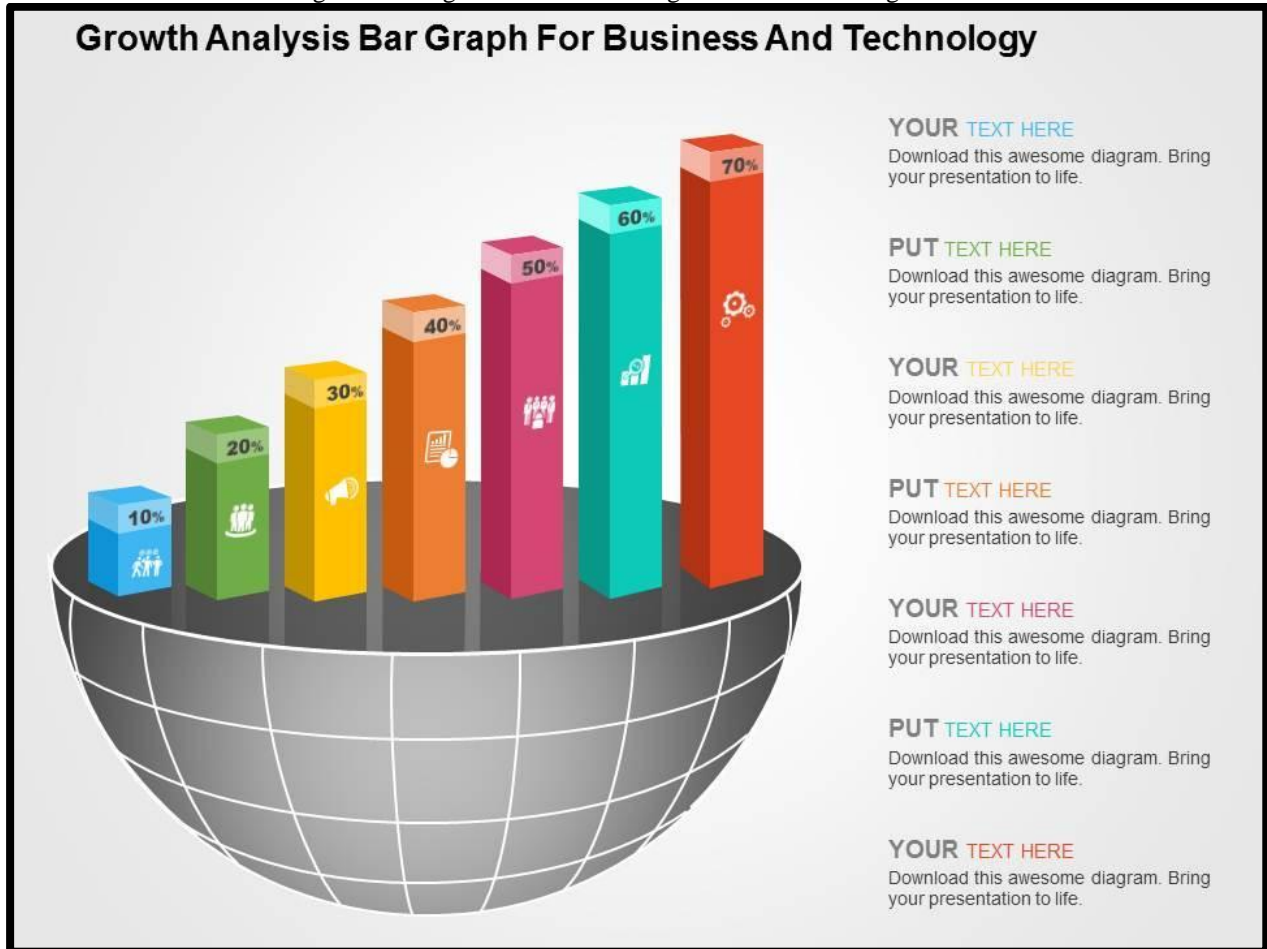
Source: Haseeb et al. 2019

Technological advancement helped organizations to analyze business trends and estimates the rise of potential risks. As illustrated in figure 3, big data analytics is gaining acceptance across different industries in order to improve customer service strategies (Haseeb et al. 2019).

Technological Advancement in Business Management

Globally companies are relying on new technologies to improve their communication with their stakeholders. It is difficult for businesses to run their activities without the involvement of the internet. As per the opinions of Ismagilova et al. (2019), interactions with business clients and customers have been made easier by the incorporation of technologies such as Skype, messages, and emails.

Figure 4: Linage between business growth and technologies



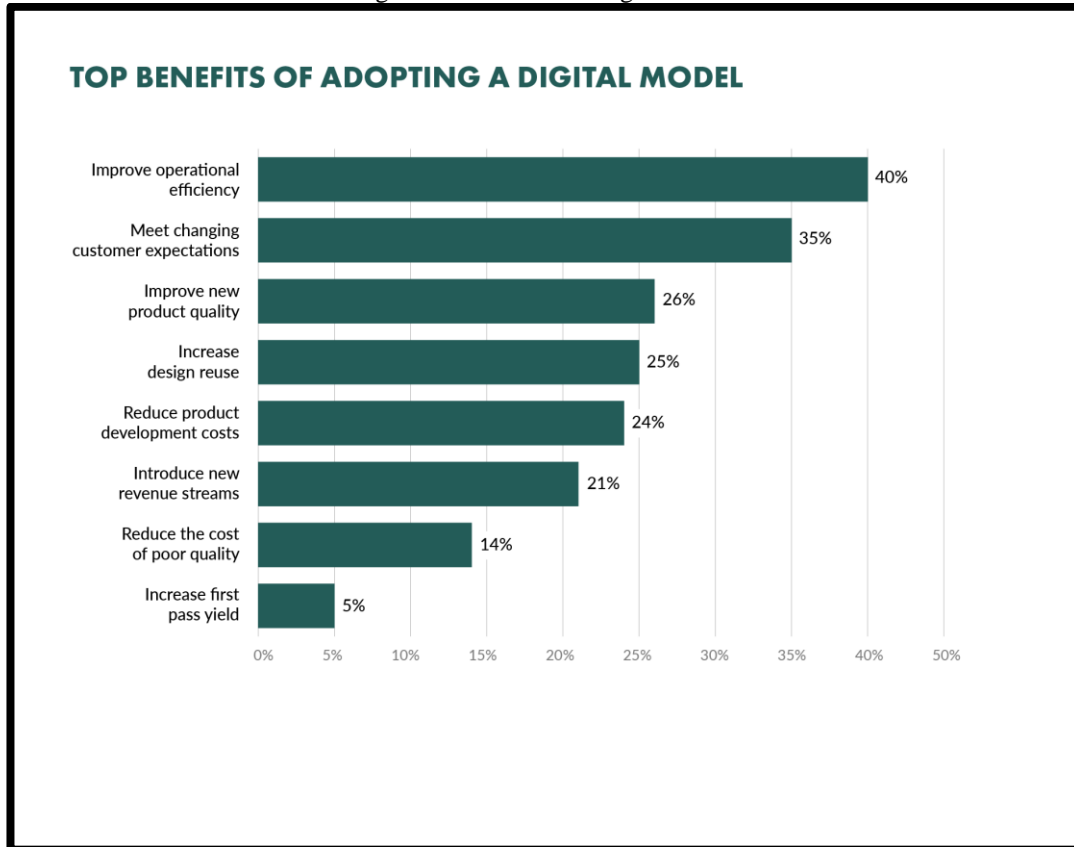
Source: Goralski & Tan, 2020

Technologies help employees to streamline their tasks and deliver quality results. Companies consider the cost-output relationship to include technological advancement to enhance their outcomes.

Impact of Technological Up Gradation on Business Management

Technologies involved by businesses are able to automate operational functions and maintain a record of the payroll. Business owners worldwide have improved their collaboration with different clients and expanded their audience reach. As per the views of Haseeb et al. (2019), with the emergence of different technologies, business activities are able to enhance their pace in sales acting and marketing. It has brought a significant change in the basic managerial functions by emphasizing on decision-making, coordination, and control.

Figure 5: Benefits of a digital model



Source: Ismagilova et al. 2019

As shown in figure 5, it can be understood that techniques have helped the business to adopt a digital model for better communication. Furthermore, business management has been incorporated to meet customer demands and enable them with a better experience.

Theory Application

Theory of digital transformation

With the help of technological advancement, a holistic approach is selected by businesses to improve their managerial, cultural, and procedural aspects. According to the critical analysis of Ahlstrom et al. (2020), change in management makes a business more adaptable and develops a business model that is able to combat risk factors. Incorporation of technologies such as cloud computing, big data, and artificial intelligence is used to promote collaboration and improve the efficiency of tasks. It enhances operational excellence and presents an organization with relevant data to come up with innovative services or products (Goralski & Tan, 2020). With the help of this theory, it can be concluded that technological advancement targets to increase developmental changes of the firm as a whole.

MATERIAL AND METHODOLOGY

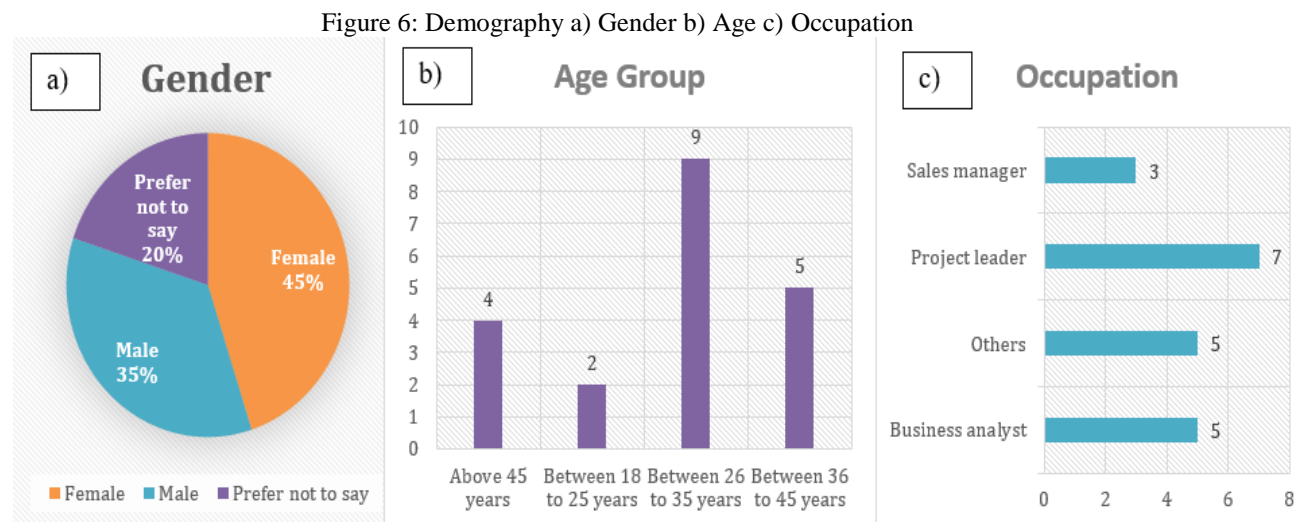
The research article has undertaken a primary quantitative research strategy to collect informative data in order to uncover vital aspects of the study. A survey is conducted by including 20 randomly selected participants for generating real-time data. As per the point of view of Pandey & Pandey (2021), a well-structured questionnaire is presented to survey participants to explore their viewpoints and opinions. This research method enables exploring numerical data and establishing relations between ideas and concepts.

RESULTS AND DISCUSSION

Results

Demography

From the above diagram, a graphical presentation of survey responses is noticed. The survey has been conducted among 20 survey participants, and three gender categories are mentioned. The first category of the male observes about 35% of responses whereas 45% of respondents are female. In addition, prefer not to say category highlights 20% of participants.



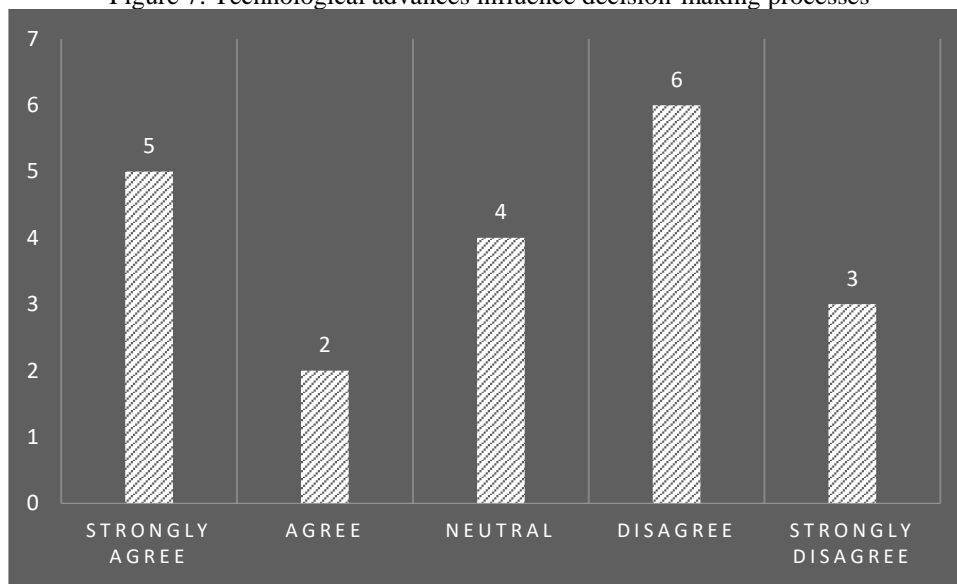
Source: Google Form

The above diagram demonstrates a graphical presentation of survey responses. The survey has been conducted among 20 survey participants, and four age categories are mentioned. The alternatives show between 18 to 25 years, 26 to 35 years, and 36 to 45 years which showcase about 10%, 45% and 25% of responses sequentially. The above 45 years category records about 20% of respondents.

From the above diagram, a graphical presentation of survey responses is noticed. The survey has been conducted among 20 survey participants, and four occupation categories are mentioned. It is seen; about 15%, 25%, and 35% of participants have selected the alternatives of sales manager, business analyst, and project leader respectively. The others segment highlights 25% of participants.

Technological advances influence decision-making processes

Figure 7: Technological advances influence decision-making processes

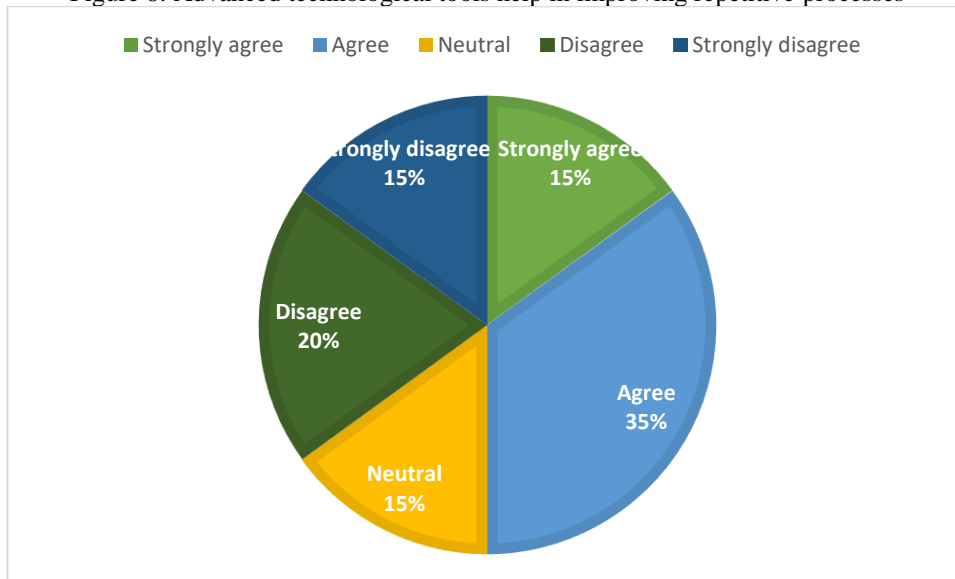


Source: Google Form

The above diagram illustrates a graphical presentation of survey responses. It is seen that out of 20 survey participants, approximately 25% have selected the strongly agree option whereas 10% have chosen the agree option. Furthermore, about 20% of respondents have recorded their opinion of the neutral alternative. The strongly disagree and disagree alternatives have observed in about 15% and 30% of responses respectively.

Advanced technological tools help in improving repetitive processes

Figure 8: Advanced technological tools help in improving repetitive processes

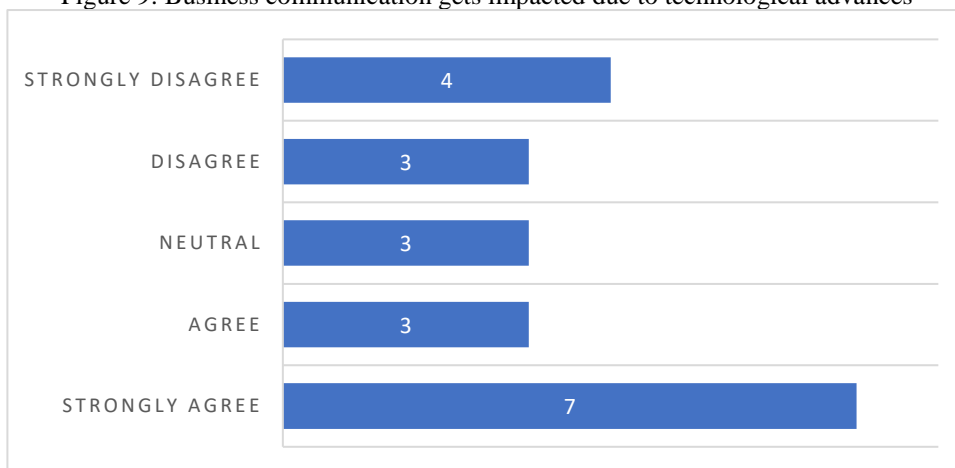


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Business communication gets impacted due to technological advances

Figure 9: Business communication gets impacted due to technological advances

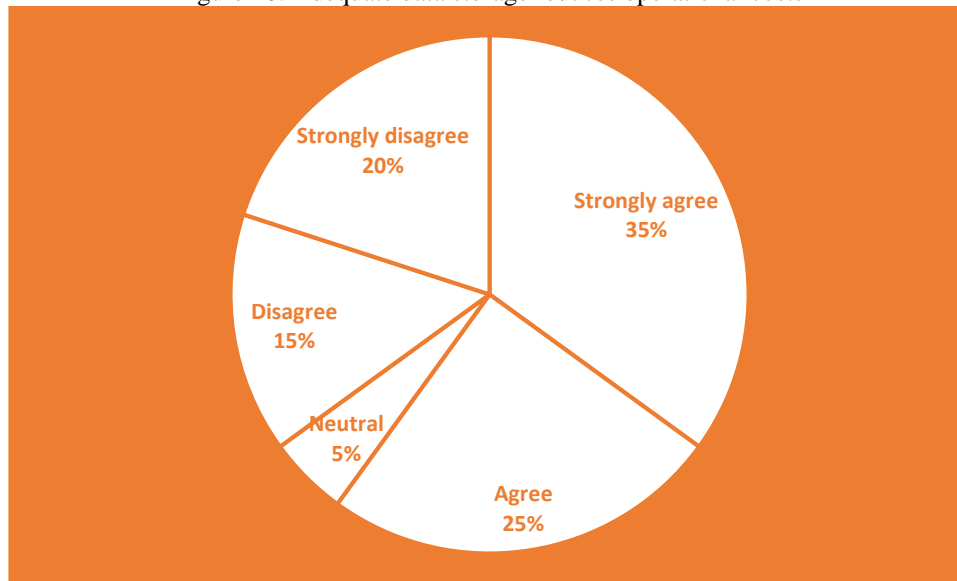


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Adequate data storage reduces operational costs

Figure 10: Adequate data storage reduces operational costs

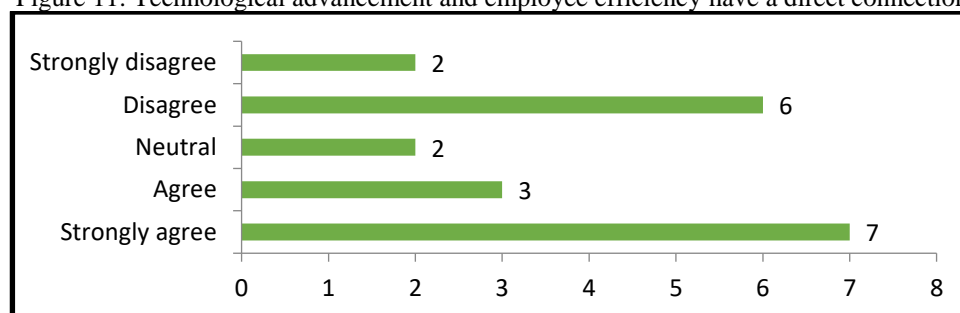


Source: Google Form

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Technological advancement and employee efficiency have a direct connection

Figure 11: Technological advancement and employee efficiency have a direct connection

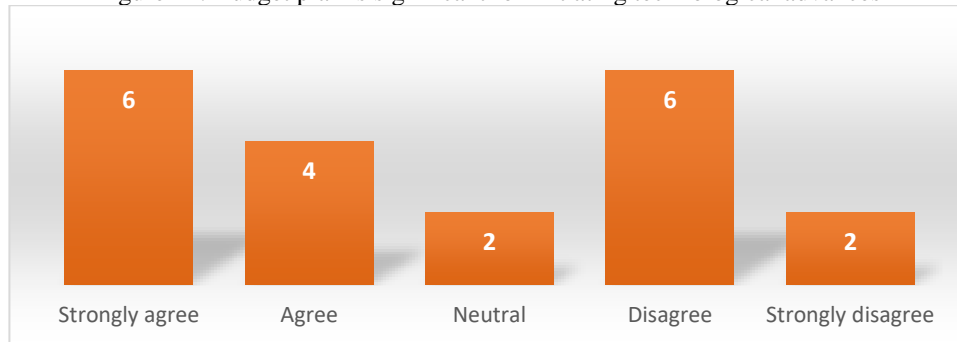


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Budget plan is significant for initiating technological advances

Figure 12: Budget plan is significant for initiating technological advances

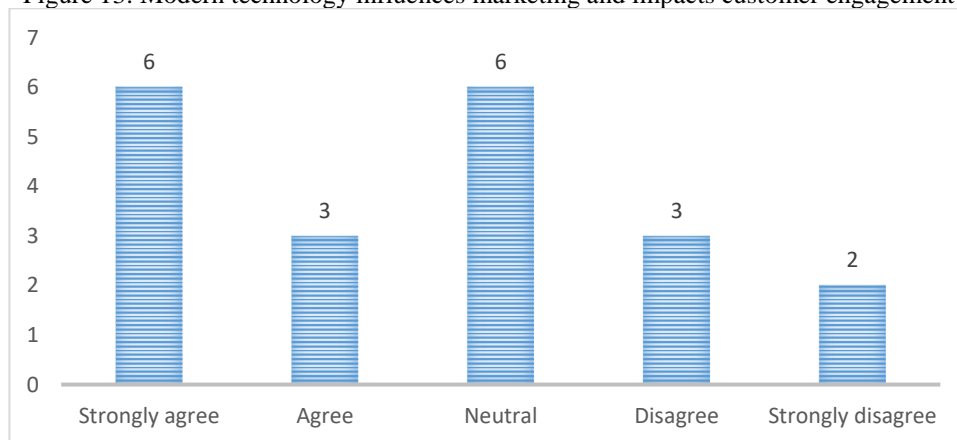


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Modern technology influences marketing and impacts customer engagement

Figure 13: Modern technology influences marketing and impacts customer engagement



Source: Google Form

The above diagram illustrates a graphical presentation of survey responses. It is seen that out of 20 survey participants, approximately 25% have selected the strongly agree option whereas 10% have chosen the agree option. Furthermore, about 20% of respondents have recorded their opinion of the neutral alternative.

DISCUSSION

Demographic analysis is the evaluation of participant details such as gender, age, occupation and others. This helps in identifying the target samples based on their demography since their responses are critical for data analysis. Accordingly, the survey results showcased the highest number of participants belonging to the female category, between 26 to 35 years and are project leaders. Decision-making is an essential criterion within organisational functioning since it deals with major strategic planning (Haseeb et al. 2019). In terms of this, the inclusion of highly developed technology can complement the decision-making aspects of management techniques. Repetitive business functions such as data entry are quite laborious to perform manually; however, digital technology can help reduce manual handling. According to Bessen (2019), it reduces employee productivity; therefore, the application of automation can increase business operations. It is witnessed in traditional business communication used to be conducted within the parameter of conference rooms. As per Appio et al. (2019), ever since the digital age ushered in, business communication has achieved a new dynamic wherein virtual communication takes place. This inherently reduces time consumption, and employee ordeals, therefore it leverages team collaboration from all spectrums. Data storage has become a major hindrance in most business functions due to its management and retrieval processes. Through the implementation of new technology, businesses have attained significant development in data storage capabilities (Lim et al. 2020). Effective usage of cloud computing and other vital digital tools has improved the existing conditions of management techniques.

It is an established notion that technology is severely responsible in terms of employee efficiency. This is because repetitive tasks performed by workers heighten manual errors and reduce their engagement. As opined by Kotarba (2018), with appropriate technology, the base for enhancing employee efficiency is set forth and it aids in attaining company goals and project objectives. It is ascertained that digital transformation comes at a huge cost, that is technological advancements require major financial support. Thereby, developing an analytical budget plan is crucial for the introduction of modern technology that upscale the formation of management techniques. Product marketing is one of the core fundamentals of the business

operations of firms. Considering the present society's digital inclination, marketing and advertising of goods through social media platforms increase customer engagement (Ahlstrom et al. 2020).

CONCLUSION

It is observed that technological advances are in huge demand for upgrading business management techniques. The context of digital transformation is possible due to the introduction of effective modern technologies. A major drawback of this study is linked to the limited timeframe, since conducting surveys requires an elongated time span. Furthermore, a low number of survey respondents become a barrier to the study. This is because the higher the number of participants, the more reliable and accurate data is collected.

This study outlines the importance of technological advances within the business management context. Future suggestions underline the internal and external factors related to modern technology that has major implications regarding the business functions.

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APPENDIX

Survey Questions

1. What is gender?
 - a) Male
 - b) Female
 - c) Prefer not to say
2. What is your age?
 - a) Between 18 to 25 years
 - b) Between 26 to 35 years
 - c) Between 36 to 45 years
 - d) Above 45 years
3. What is your occupation?
 - a) Sales manager
 - b) Business analyst
 - c) Project leader
 - d) Others
4. Technological advances are essential for informed decision-making processes in business management
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
5. Repetitive processes involved in business management gets positively impacted by technological advances
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
6. Technological advances have made major improvements in business communication by leveraging collaboration

- a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
7. Large amount of data is stored and managed due to technological advances reducing operational business costs
- a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
8. Technological advancement is highly significant to enhance employee efficiency
- a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
9. Improving the budget structure supports the introduction of technological advances in business management practices
- a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
10. Effective product marketing is achieved through modern technology influencing customer engagement
- a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree