

تأثير التقنيات على الشركات الناشئة و المتوسطة: الفرص والتحديات

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Abstract:

In today's world, technology is an essential part of any business as it can help improve productivity, efficiency, and profitability. This is especially true for startups and medium-sized businesses in Saudi Arabia, where technology adoption has become increasingly important for their growth and success. This paper explores the impact of technology on startups and medium-sized businesses in Saudi Arabia, with a specific focus on identifying the factors affecting technology adoption, the challenges and opportunities in technology adoption, and the impact of technology on employee productivity and organizational culture.

The study uses qualitative research techniques, including in-depth interviews and focus groups with individuals from various sports-related business sectors, to gain a better understanding of how technology is used in small and medium-sized companies in Saudi Arabia. The study highlights the importance of understanding the role that technology plays in encouraging creativity, scalability, and efficiency in the Saudi Arabian business environment.

The research identifies several factors that affect technology adoption in startups and medium-sized businesses, including individual factors, technological factors, organizational factors, and environmental factors. The study notes that user acceptability, organizational culture, and environmental factors play a crucial role in the adoption of technology. The study also identifies the challenges and opportunities in technology adoption, such as the cost of implementation, resource scarcity, and poor internet connection, and the benefits of technology for employee productivity and organizational culture.

Furthermore, the study highlights the importance of understanding the impact of technology on employee productivity and organizational culture. It notes that organizational culture plays a significant role in job performance, employee satisfaction, and the ability to face difficulties and avail the benefits

of technology correctly. The study also identifies the theoretical framework for the study, including the Fishbein and Ajzen theory, the theory of planned behavior, and the technology acceptance model.

In conclusion, this study identifies the factors affecting technology adoption, the challenges and opportunities in technology adoption, and the impact of technology on employee productivity and organizational culture in startups and medium-sized businesses in Saudi Arabia. The study highlights the importance of technology for the growth and success of small and medium-sized businesses in Saudi Arabia and provides insights into how technology can be adopted and utilized to improve productivity, efficiency, and profitability.

Introduction:

People who were born between the early 1980s and the mid-1990s to the early 2000s are referred to as millennials, or generation Y. They are praised for their technological know-how, openness to diversity, and commitment to balancing work and personal life. In recent years, growing and new innovations in technology have helped the Middle East's economy. Massive investments have been made by the private as well as public sectors in 5G, AI, the worldwide web of things (IoT), the blockchain, cloud computing, and cybersecurity. The UAE and Saudi Arabia, meanwhile, dominate the world in cutting-edge digital transformation technological devices, according to the Dell technological advances Digital Transformation Index 2020 report. According to a YouGov survey sponsored by SAP, 92% of Saudi government IT decision-makers agreed that the Covid-19 pandemic has been speeding up their digital transformation over the past year.

Startup refers to a business that has only recently started. Startups are formed by one or more business owners who need to provide a good or service that they think there is a market for medium enterprises are companies with revenues, assets, or staff counts below a particular threshold. Both startups and medium-sized businesses depend substantially on technology to expand and flourish. Technology permits scalability, innovation, and operations that are effective and streamlined in startups. It gives startups the capacity to automate processes, use cloud computing for infrastructure that is reasonable, and upend conventional industries with revolutionary developments. Technology enables medium-sized businesses to create by reducing current operations, boosting effective communication and cooperation, and offering influential data analytics. These businesses can scale their operations, maintain competitiveness, and adapt to fluctuating marketplace circumstances because of it.

In Saudi Arabia, technology is vital for ensuring the growth and success of small and medium-sized businesses. Businesses can use technology to maximize their processes, raise performance, and establish a strong online presence through digital transformation. SME growth in Saudi Arabia rose to 6% (Arab

News, 2022). These firms can widen their reach and enter overseas marketplaces thanks to the availability of e-commerce platforms and internet advertising tools. Technology additionally facilitates data-driven decision making, which enables enterprises to gather insightful information and make smart strategic choices. In the Saudi Arabian business environment, technology generally acts as an agent for creative thinking, productivity, and competitiveness.

Considering the formation of technological innovation in Saudi Arabia, little has been discovered about how affect shapes the course of various companies. The current research wants to investigate how technologies affect small and medium-sized businesses, with a particular emphasis on the possibilities and challenges that may evolve. Examining how technology affects many aspects of start-ups and medium-sized firms i.e., employee productivity and organizational culture is an essential element of current studies on the subject. This requires one to be aware of the importance that technology is to encouraging creativity, scalability, and efficiency. Saudi Arabia's Vision 2030 plan places an enormous value on the role that technological advances and digital transformation play for encouraging economic growth and diversification. You can better connect yourself with the tactical goals of the nation and raise your employability in development-oriented industries by studying the role of technology.

Literature Reviews :

In today's world, technology is an essential component of any business, and this is especially true for startups and small- to medium-sized enterprises (SMEs) in Saudi Arabia. The adoption of technology plays a critical role in the success of these businesses, and it is imperative for them to keep up with the latest technological trends to remain competitive. The literature review examines the numerous factors affecting technology adoption in startups and SMEs, such as internal factors like organizational culture and external factors like government policies.

One of the critical factors affecting technology adoption in startups and SMEs is the availability of resources. These businesses often have limited resources, which can make it difficult to implement new technologies. However, the literature review shows that startups and SMEs that invest in technology can benefit from cost savings, increased efficiency, and improved accuracy, ultimately leading to enhanced productivity and profitability.

The level of digital literacy is another critical factor that affects technology adoption. SMEs with employees who lack digital literacy may find it challenging to adopt new technologies, which could hinder their growth and competitiveness. To overcome this challenge, businesses need to invest in employee training and support to ensure that their employees are equipped with the necessary skills to utilize new technologies effectively.

The compatibility of the technology with the business model is another significant factor that affects technology adoption. Businesses need to ensure that the technology they adopt is compatible with their existing business models. This compatibility is essential to ensure the effective implementation of the technology and to avoid any disruptions to the current operations of the business.

In addition to the factors affecting technology adoption, the literature review also explores the challenges and opportunities that come with technology adoption. For example, while technology adoption can lead to cost and time savings, it can also be expensive to implement and require significant investments in training and support. However, the potential benefits of technology adoption, such as increased efficiency and accuracy and the potential for new market opportunities, often outweigh the challenges.

The review also highlights the impact of technology on employee productivity and organizational culture. The adoption of technology can significantly impact employee productivity by automating tasks, streamlining processes, and providing access to real-time data. However, businesses need to ensure that the adoption of technology does not negatively impact the organizational culture.

Problem of the Study:

The problem being addressed in this study is a pressing one, as it concerns the identification of the reasons behind the impact of technology adoption on startups and medium-sized organizations. By understanding these reasons, entrepreneurs will be better equipped to recognize and utilize the resources available to them in the tech industry. Additionally, it is important to identify the numerous factors that influence the adoption of technology by small and medium-sized enterprises (SMEs), as this will allow these firms to better manage external pressures such as market competitiveness.

In order to achieve these goals, a multifaceted approach will be taken which will involve identifying the various barriers that SMEs face when it comes to technology adoption. This will be of great benefit to these firms, as it will enable them to minimize costs, save time, and increase productivity. Moreover, the study will delve deeper into the impact of technology on employee productivity and organizational culture, as this is a critical aspect that has not been fully explored in previous research. Through this comprehensive approach, the study aims to uncover valuable insights that can be utilized by entrepreneurs and SMEs alike to improve their operations and achieve greater success in the long run.

Importance of the study:

The study which is about to be discussed in this document is significant in various aspects and can be elaborated further. Firstly, the study aims to advance the knowledge and understanding of how technology is utilized in small and medium-sized companies in Saudi Arabia, which can significantly benefit them in the long run. By identifying the technological utilization patterns, the study can help these companies in identifying areas of improvement and identifying opportunities that they could leverage in order to increase their productivity and success.

Furthermore, the study can aid in identifying the organizational culture, which plays a crucial role in an employee's job performance and satisfaction. Organizational culture refers to the shared values, beliefs, and norms that govern how employees behave and interact with each other in an organization. It is imperative to have a positive and conducive organizational culture as it helps the organization face difficulties and reap the benefits of its correct application. Therefore, by understanding the organizational culture, the study can help organizations in identifying areas of improvement and creating a more conducive work environment that is aligned with their business objectives.

Additionally, the study can help fill the gap that exists as no previous research conducted in Saudi Arabia highlights the reasons for the impact of technology on employee productivity and organizational culture. Through this study, researchers can identify the factors that contribute to the success or failure of technology implementation and its impact on the organizational culture. Therefore, this study's findings can be useful for organizations operating in the Saudi Arabian setting to optimize their technological utilization and improve their overall performance and success.

Objectives of the Study :

This study intends to determine:

1. To identify the factors affecting technology adoption in startups and medium-sized organizations in Saudi Arabia.
2. To explore the challenges and opportunities in technology adoption in startups and medium-sized organizations in Saudi Arabia.
3. To understand the impact of technology adoption on employee productivity and organizational culture in startups and medium-sized organizations in Saudi Arabia.
4. To identify the theoretical framework for the study, including the Fishbein and Ajzen theory, the theory of planned behavior, and the technology acceptance model.
5. To provide valuable insights that can be utilized by entrepreneurs and SMEs in Saudi Arabia to improve their operations and achieve greater success in the long run.

Questions of the study:

1. What are the factors affecting technology adoption in startups and medium-sized organizations in Saudi Arabia?
2. What are the challenges and opportunities in technology adoption in startups and medium-sized organizations in Saudi Arabia?
3. What is the impact of technology adoption on employee productivity and organizational culture in startups and medium-sized organizations in Saudi Arabia?
4. What is the theoretical framework for the study, and how can it be used to understand technology adoption in startups and medium-sized organizations in Saudi Arabia?
5. How can the findings of the study be utilized by entrepreneurs and SMEs in Saudi Arabia to improve their operations and achieve greater success in the long run?

Literature Analysis:

This section of the paper will give a detailed review of the factors affecting technological adoption in SMEs, challenges in adopting technology and its impact on employee productivity. This would be supported by literature from developing and developed economies.

Factors affecting technology adoption in startups and SMEs:

There are three main factors affecting Information Technology startups that are external, organizational, and individual and has four stages that leads to development of them such as seed, early, growth and intervention (Santisteban & Mauricio, 2017). Another study also points out factors in technology adoption that include competition from existing startups or SMEs, perception related to benefits of adopting a particular technology and organizational acceptability (Ritchie & Brindley, 2010).

In a study by Muraya (2009) which listed out important factors responsible in adoption of technology by startups and SMEs were sellers, buyers, government involvement and competition pressure. The writer suggested that environmental and organizational features are needed for an intensive technological implementation in the startups and medium sized organizations.

Four factors have been highlighted that lead towards technological adoption in MSME (Micro, Small, Medium, Enterprise). Firstly, individual factors include user acceptability, technological trust, digital media awareness or knowledge. The user acceptability is based on the individual knowledge of how to cope with the use of media for personal and business use, trust in technology is related to being aware of pros and cons of using media. Secondly, technological factors that includes those which are used inside and outside by the company for the growth of the business (baker ,2012). Thirdly, organizational factors that management support, organizational culture, external impact. Fourthly, environmental factors includes, natural disasters, political situation, economic instability, government role (Adisthy Shabrina Nurqamaran, 2022).

A study has been done in rural Saudi Arabia which has highlighted important factors that influence the technological adoption in small and medium scale enterprises. Such factors consist of competitive advantage, top management support, organizational culture, and ICT knowledge (adnan msutafa alber, 2017).

Challenges and opportunities in technology adoption:

There are many existing literatures that identifies barriers to technology adoption. One of them has identified many challenges that hinders SMEs in technology adoption such as time which is influential in implementing things timely related to e-business (Scupola, 2009), difficulties associated with e-business (Kaynak et al., 2005) and costs of implementation (Gunasekaran and Ngai, 2007). Another barrier to adoption is resource scarcity.

Another study has been carried out in Khuzestan province which identified three barriers in using e-commerce. The first one is cultural barriers (individual owns perception, buyers and sellers benefits from the e-commerce), secondly, Organization environment and poor government (facilities include education, infrastructure).

Moreover, other reasons have been specified as barriers to SMEs such as poor internet connection, lack of access to internet, low qualified teachers, chances of risk are less, deficiency of government support, availability of no such proper training (Kiyanjoori et al.).

A study in a review showed that significant expenses, poor internet security and absence of help of overall set of laws can forestall reception of Web based business in organizations (Maryeni et al.).

In their study, Thulani et al. found the high cost of adopting e-commerce, the complexity of the application, its disparity with consumers' and suppliers' transaction methods, a lack of understanding of the benefits of E-commerce for the organization, a lack of knowledge, and a lack of time. E-commerce can be used to overcome barriers to electronic commerce acceptance. Arendt argues that high costs, a lack of an innovation culture, the requisite skills and knowledge, customer Internet demand, infrastructure,

security, regulatory framework, as well as a lack of time and provider intent to adopt E-commerce, are all barriers to electronic commerce acceptability.

According to Lawrence and Tar, technological considerations such as available technology skills, skilled employees, equipment costs, communications and information technology networks, security and trust, and legal frameworks are impediments to E-commerce acceptability in the United States.

Impact of Technology on Employee Productivity and Organization Culture:

Technology adoption can be difficult as it may not give the same expected return. There exists a problem in implementing, implementation cost and complexities in implementing it. It seems difficult for low performance firms to adopt the new technology considering the impact.

Organization culture is important as it portrays a positive impact on the job performance of an employee, employee satisfaction. So, a right culture is required to help the organization to face difficulties and avail the benefits of applying it correctly (Zammuto & O'Connor, 1992).

Technology startup companies tend to create job opportunities and it is higher in the knowledge services sector. One study showed that companies that are rich in technology tend to create more employment opportunities than low tech related companies. Technological innovation generates new business investment, and allocations of technology advancement performance lead to improved worker pay, which leads to an increase in employment and consumption. As innovative technology tends to replace manual labor, it reduces the price of the product which means more product demand and for more productivity additional labor is required which will lead to employment.

Theoretical framework of the study:

There are three main theories which define human behavior of technological acceptance, intentional behavior.

Theory of Reasoned Action (TRA)

The theory is given by Fishbein and Ajzen (1975) which determines the intentional behavior of an individual whether to indulge in it or not. It defines the relationship between attitude and subjective norms. Beliefs reflect the likelihood that a person believes some action will result in a specific outcome; attitudes define whether that outcome is favorable or unfavorable; and intention describes how someone intended to act in response to attitudes and convictions.

Theory of Planned Behavior (TRB)

The theory of planned behavior (TPB) is a cognitive theory by Azjen (1985) that proposes that an individual's decision by their intention to engage in that behavior. Intentions are determined by personal attitudes, subjective norms, and perceived intentional behavior.

Technology Acceptance Model (TAM):

This model is given by Fred Davis who proposed the Technology Acceptance Model (TAM) in the 1980s as a theoretical framework to explain and foresee people's adoption and embrace of new technology. It indicates perceived worth, and simplicity of usage are the main determinants of adoption. People are more disposed to adopt a technology if they deem it to be helpful and simple to use. TAM has been constantly utilized to analyze user conduct and digital attitudes.

Methodology and Research Methods:

It will be explored using qualitative research techniques; how technology is used in Saudi Arabia's small and medium-sized companies. It will involve in-depth interviews and focus groups with sports organizations, players, and fans. With the help of these methodologies, the researchers will be able to examine the opinions, views, and life experiences of the participants and gain rich, deep understandings about how technology has changed Saudi Arabia's sports business. It is an exploratory research topic as this decision is reinforced by the scant amount of literature that exists in this arena, the intricate nature of technology adoption in these businesses, and the possibility of gaining novel points of view.

Study Tools:

The data collection technique would be based on online questionnaires surveys. The questionnaire will help in collecting data related to factors impacting technology adoption, barriers to technology adoption and impact on employee productivity and organizational culture. A descriptive research design would be adopted, and a simple Ols regression would be performed to find out the factors impacting technology adoption, barriers to technology adoption and impact on employee productivity and organizational culture in startups and medium scale enterprises. Where each one is performed separately.

Field of Study:

People employed in Saudi Arabia's sports industry would make up the population. This includes specialists, executives, and participants participating in multiple capacities within Saudi Arabia's medium-sized and start-up sports businesses. Individuals from various Technology-related business sectors, including startups, Mid-size firms, or Large organization could be included as part of the sample.

The Methodological Framework of the Study:

Research Design:

The research design for this study involves qualitative research techniques, including in-depth interviews and focus groups, to gain a better understanding of how technology is used in small and medium-sized companies in Saudi Arabia.

Data Collection:

The data will be collected through an online survey. Participants will be able to complete the survey at their convenience, and the data will be analyzed to identify the factors impacting technology adoption, the challenges and opportunities in technology adoption, and the impact of technology on employee productivity and organizational culture in startups and medium-sized businesses in Saudi Arabia. The use of an online survey will allow for a larger sample size and provide a more comprehensive understanding of the research topic.

Data Analysis:

The data collected from the online survey will be analyzed to identify the factors impacting technology adoption, the challenges and opportunities in technology adoption, and the impact of technology on employee productivity and organizational culture in startups and medium-sized businesses in Saudi Arabia. The analysis will involve identifying key themes and patterns in the data, as well as conducting statistical analyses to quantify the relationships between different variables.

Study Area:

This study is about how technology can help small businesses in Saudi Arabia. It talks about things like why some businesses use technology and others don't, the good and bad things that can happen when a business starts using technology, and how technology can affect how well employees work together. The study also explains how the researchers did their work. The goal of the study is to help small business owners do better by giving them good ideas to try.

Proposed Statistical Measures and Tests to Be Used:

The data collected through online surveys will be analyzed using both qualitative and quantitative methods. Thematic analysis will be used to identify key themes and patterns in the qualitative data, while statistical analyses will be conducted to quantify the relationships between different variables.

- Descriptive statistics, such as means, frequencies, and standard deviations, will be used to summarize the data collected from the online survey. Inferential statistics, such as regression analysis, factor analysis, and correlation analysis, will be used to test hypotheses and identify relationships between variables.
- Statistical analyses will be conducted using SPSS, a statistical software package commonly used in social sciences research.
- Correlation analysis is important in identifying the factors affecting technology adoption and its impact on employee productivity and organizational culture in startups and medium-sized businesses in Saudi Arabia.

- Regression analysis can be used to make predictions or to identify the strength of the relationship between variables. It can also help identify outliers, which are data points that do not fit well with the rest of the data.
- Factor analysis can also be used to reduce the number of variables in a data set, and to identify the most important variables that are driving the patterns or correlations observed. Overall, factor analysis is a powerful tool that can provide valuable insights into complex data sets and help researchers to better understand the world around us.
- Content analysis which involves examining and interpreting various types of media to identify patterns, themes, and trends, in Saudi Arabia.
- Chi-square tests can be used to examine the relationship between categorical variables, such as the relationship between SMEs and technology use in building the structure of an organization.

The statistical analyses will allow for rigorous testing of hypotheses and identification of relationships between variables, while the qualitative data will provide rich, in-depth insights into the factors affecting technology adoption, the challenges and opportunities in technology adoption, and the impact of technology on employee productivity and organizational culture in startups and medium-sized businesses in Saudi Arabia.

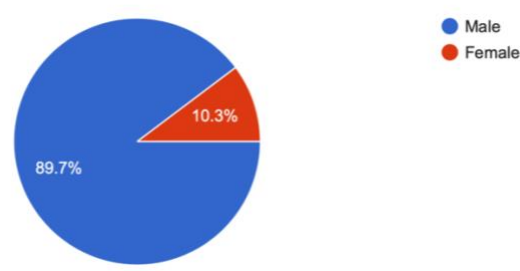
Study Findings

The online survey was conducted to collect data from a larger sample size. This report presents the findings of the online survey, which sought to identify the factors impacting technology adoption, the challenges and opportunities in technology adoption, and the impact of technology on employee productivity and organizational culture in startups and medium-sized businesses in Saudi Arabia. The sample size of respondents who answered the published survey consisted of 73, while only 39 responded to the duplicated questions which were written in reverse to ensure the responses were correct.

Results of Data Analysis

Demographical Information

What is your gender?



Gender	Percentage
Male	89.7%
Female	10.3%

Figure 1 Gender distribution of respondents.

What is your age?

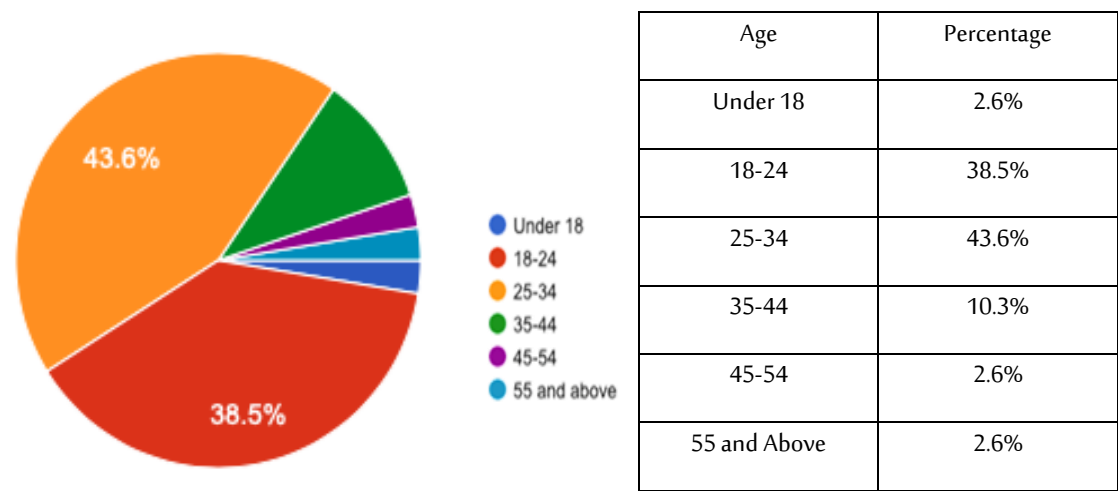


Figure 2 Age distribution of respondents

What is your highest level of education?

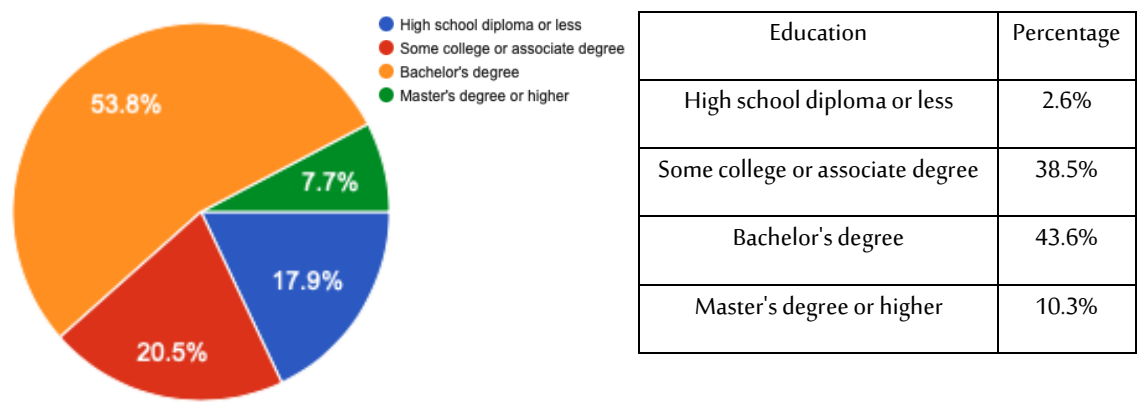


Figure 3 Education distribution of respondents

What type of technology is used in your current company?
(Check all that apply)

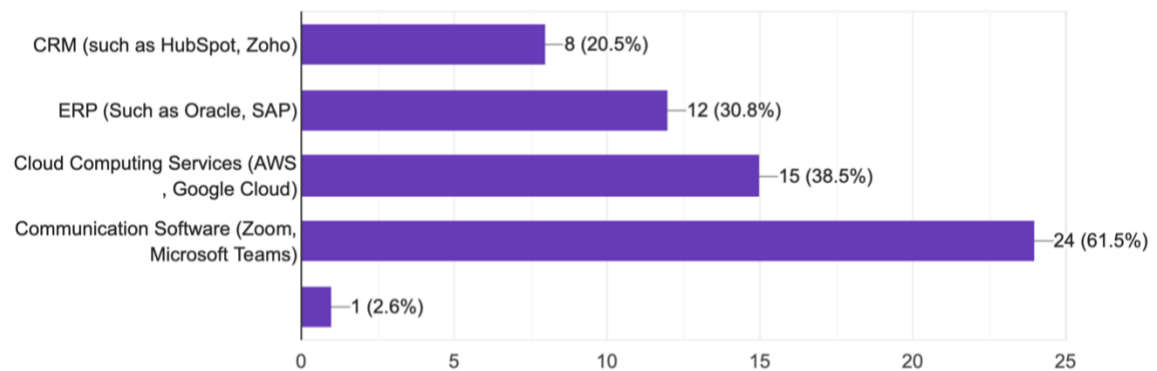
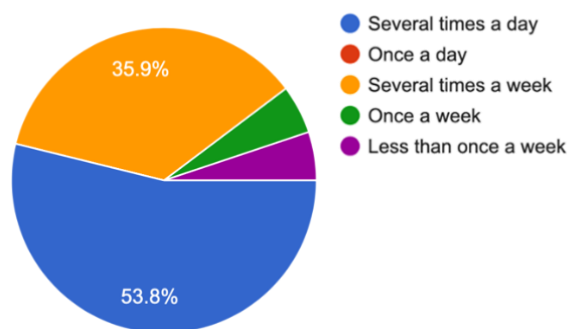


Figure 4 Technology used in the organization of respondents

How frequently do you depend on these technology in your day?



Using per day	Percentage
Several times a day	53.8%
Several times a week	35.9%
Once a week	5.1%
Less than once a week	5.1%

Figure 5 Usage of Technology per day of respondents

How has technology impacted your daily task?

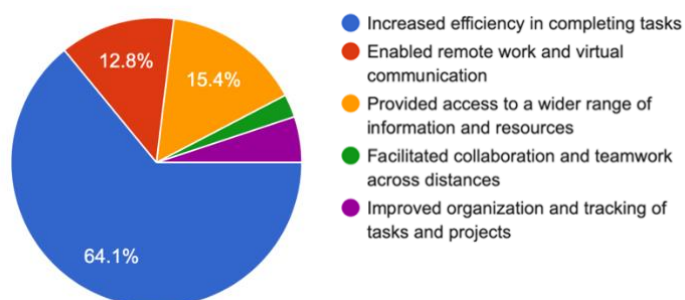


Figure 6 The impact of Technology of respondents

The Impact	Percentage
Increased efficiency in completing tasks	64.1%
Enabled remote work and virtual communication	12.8%
Provided access to a wider range of information and resources	15.4%
Facilitated collaboration and teamwork across distances	2.6%
Improved organization and tracking of tasks and projects	5.1%

How does technology impact in evaluation the performance of team in the project?

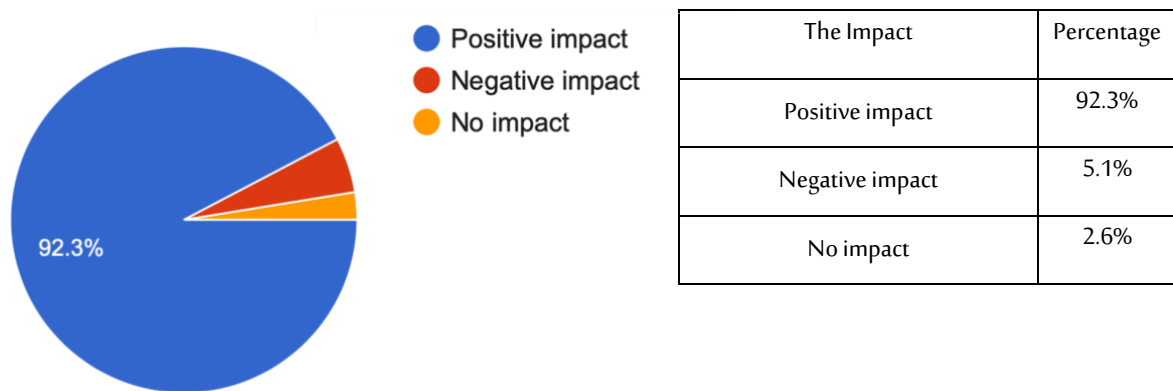


Figure 7 The impact of technology on the performance of respondents project

What types of technology used in your organization find most helpful ?
(Check all that apply)?

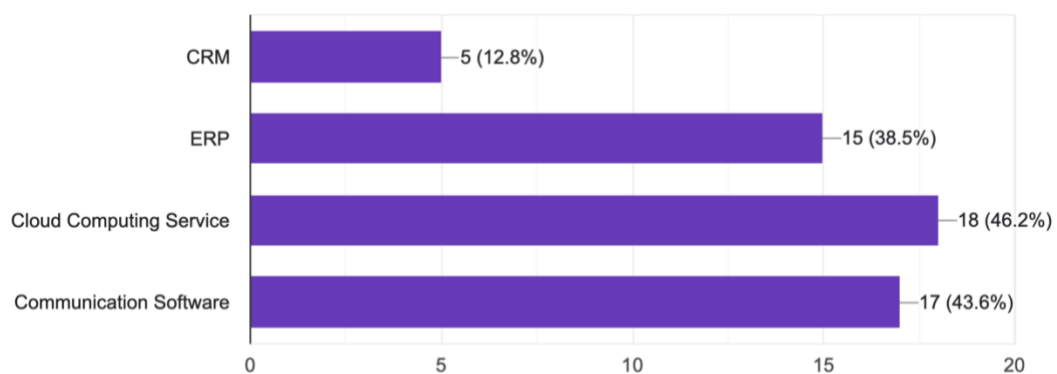


Figure 8 The most helpful technology in organization based on respondents

How often do you come across technology-related issues in organization?

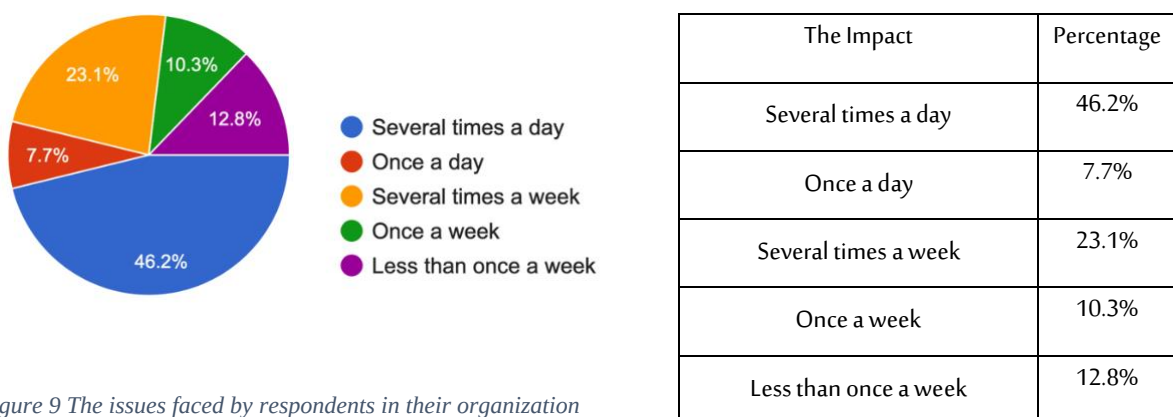


Figure 9 The issues faced by respondents in their organization

How does technology impact your opinion on the ability of AI to replace humans?

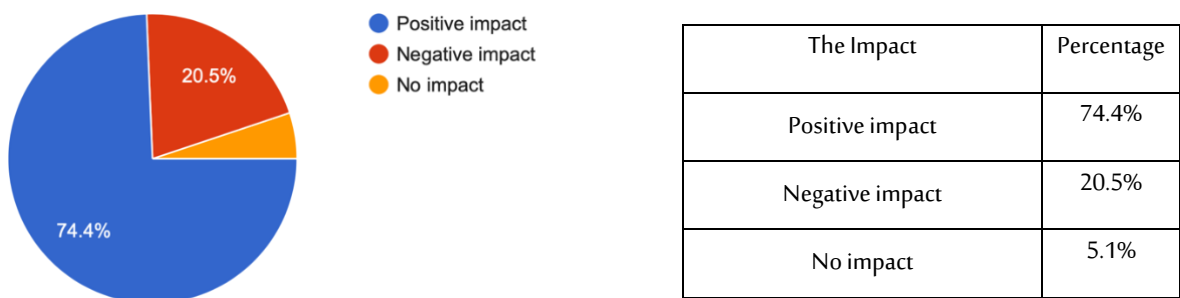


Figure 10 The impact of technology on humans jobs

In your opinion, what is the most significant technology-related issue in Saudi Arabia?
(Check all that apply)?

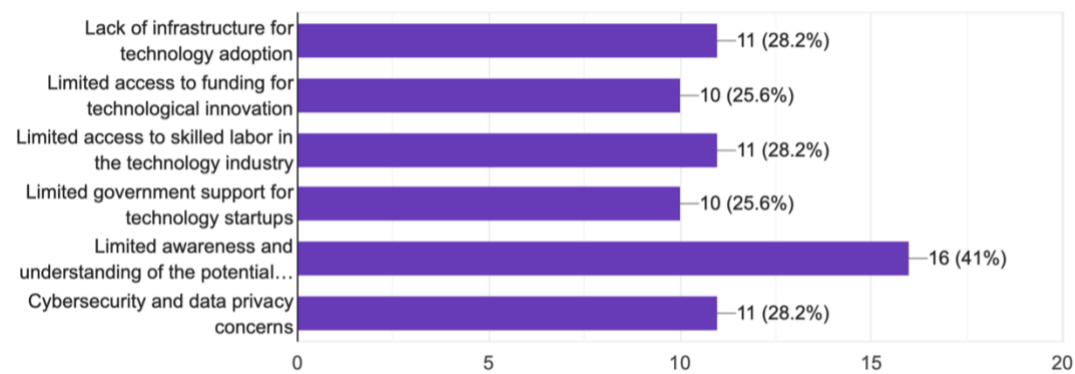


Figure 11 The most significant issues of technology in Saudi Arabia based on respondents

Summary:

As technology continues to evolve and transform the business landscape, startups and small to medium-sized enterprises (SMEs) in Saudi Arabia must embrace technology to stay competitive and thrive. The adoption of technology can help businesses streamline their operations, improve efficiency, and access new markets. However, the journey towards technology adoption can be complex and challenging, and it requires careful planning and execution.

To better understand the factors impacting technology adoption in Saudi Arabia, this study conducted a literature review and collected data through a survey. The literature review revealed that technology adoption in SMEs is affected by various factors, such as external, organizational, and individual factors. External factors include the political, economic, social, and technological environment in which the business operates. Organizational factors include the culture, structure, and resources of the organization. Individual factors refer to the attitudes, beliefs, and behaviors of the people involved in the technology adoption process.

The survey collected responses from individuals working in various organizations in Saudi Arabia. The majority of respondents were males between 18 and 34 years old with a Bachelor's degree. The survey found that communication software and cloud computing services are the most commonly used technologies in organizations. Respondents reported that technology adoption increased efficiency in completing tasks, facilitated remote work and virtual communication, and provided access to a wider range of information and resources. They also reported that technology adoption had a positive impact on employee productivity and organizational culture.

However, the survey also highlighted several challenges in technology adoption. Respondents reported that limited access to skilled labor in the technology industry, limited awareness and understanding of the potential benefits of technology adoption in various industries, and cybersecurity and data privacy concerns are the most significant technology-related issues in Saudi Arabia. These challenges need to be addressed to promote technology adoption and growth in the country.

To address these challenges, policymakers and stakeholders need to focus on several areas. First, they need to improve the infrastructure for technology adoption and ensure that businesses have access to the necessary technology and support. Second, they need to promote awareness and understanding of the benefits of technology adoption across various industries and sectors. This can be done through education, training, and incentives for businesses that adopt technology. Third, they need to address cybersecurity and data privacy concerns by implementing policies, regulations, and standards that ensure the security and privacy of data.

In conclusion, technology adoption is crucial for the success and growth of startups and SMEs in Saudi Arabia. The literature review and survey results both highlight the need for careful planning and execution when adopting technology. Policymakers and stakeholders need to focus on addressing the challenges and opportunities in technology adoption, such as limited access to skilled labor, limited awareness and understanding of the potential benefits of technology adoption, and cybersecurity and data privacy concerns. By doing so, they can help businesses in Saudi Arabia embrace technology, streamline their operations, and achieve growth in an increasingly digital world.

Executive Summary of the Study:

Based on the tables above, the survey collected responses from individuals working in various organizations in Saudi Arabia. The majority of respondents were males between 18 and 34 years old with a Bachelor's degree. The survey found that communication software and cloud computing services are the most commonly used technologies in organizations. Respondents reported that technology adoption increased efficiency in completing tasks, facilitated remote work and virtual communication, and provided access to a wider range of information and resources. They also reported that technology adoption had a positive impact on employee productivity and organizational culture.

The tables also provide percentages for the different responses to questions about the frequency of technology use, the impact of technology on daily tasks, and the impact of technology on evaluating team performance in a project. For example, 53.8% of respondents reported using technology several times a day, and 64.1% reported that technology increased efficiency in completing tasks. These percentages provide insight into the prevalence of technology use and the perceived impact of technology on daily work tasks and team performance in the surveyed organizations in Saudi Arabia.

Conclusions of the finding

Based on the data collected from the survey and the literature review, it is clear that technology adoption is crucial for the success and growth of SMEs in Saudi Arabia. To prepare for the future of technology in the country, SMEs should consider the following recommendations:

1. Invest in technology infrastructure: SMEs should invest in technology infrastructure and ensure that their employees have access to the necessary technology and support. This includes hardware, software, and communication tools.
2. Promote awareness and understanding of technology benefits: SMEs should promote awareness and understanding of the potential benefits of technology adoption across various industries and sectors. This can be done through education, training, and incentives for businesses that adopt technology.
3. Address cybersecurity and data privacy concerns: SMEs should address cybersecurity and data privacy concerns by implementing policies, regulations, and standards that ensure the security and privacy of data.
4. Embrace emerging technologies: SMEs should embrace emerging technologies such as artificial intelligence, automation, and the Internet of Things (IoT). These technologies can help businesses streamline their operations, improve efficiency, and access new markets.
5. Foster a culture of innovation: SMEs should foster a culture of innovation and encourage their employees to experiment with new technologies and ideas. This can help businesses stay ahead of the curve and adapt to changing market conditions.

By following these recommendations, SMEs in Saudi Arabia can embrace technology, streamline their operations, and achieve growth in an increasingly digital world.

In conclusion, this research study sheds light on the impact of technology on small and medium-sized businesses in Saudi Arabia. The findings highlight the challenges and opportunities in technology adoption, the factors affecting technology adoption, and the impact of technology on employee productivity and organizational culture. By understanding these factors and addressing the challenges, policymakers, stakeholders, and businesses can promote technology adoption and growth in the country.

List of preliminary sources and references:

- Ritchie, B., & Brindley, C. (2010). ICT adoption by SMEs: implications for relationships and management. *New Technology, Work and Employment*, 205-217.
- Santisteban, J., & Mauricio, D. (2017). SYSTEMATIC LITERATURE REVIEW OF CRITICAL SUCCESS FACTORS OF INFORMATION TECHNOLOGY STARTUPS. *Academy of Entrepreneurship Journal*.
- Nurqamarani, A. S., Priyanto, A., & Fadilla, S. (2022). TECHNOLOGY ADOPTION STRATEGY OF SOCIAL MEDIA IN MICRO SMALL MEDIUM ENTERPRISES. *RJABM (Research Journal of Accounting and Business Management)*, 6(2), 139-150.
- Adnan Mustafa AlBar & Md. Rakibul Hoque (2019) Factors affecting the adoption of information and communication technology in small and medium enterprises: a perspective from rural Saudi Arabia, *Information Technology for Development*, 25:4, 715-738, DOI: 10.1080/02681102.2017.1390437
- Zammuto, R. F., & O'Connor, E. J. (1992). Gaining advanced manufacturing technologies' benefits: the roles of organization design and culture. *Academy of Management Review*, 17(4), 701- 728.
- Choi, D.S.; Sung, C.S.; Park, J.Y. How Does Technology Startups Increase Innovative Performance? The Study of Technology Startups on Innovation Focusing on Employment Change in Korea. *Sustainability* 2020, 12, 551. <https://doi.org/10.3390/su12020551>

Appendices of the study:

Survey Questionnaires

Introduction:

Thank you for participating in this study. The purpose of this survey is to understand the impact of technology on SMEs in Saudi Arabia. Your input is valuable, and we appreciate your time and effort.

Please read each question carefully and answer to the best of your ability.

Section 1: Demographic Information

1. What is your age?

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55 and above

2. What is your gender?

- Male
- Female

3. What is your highest level of education?

- High school diploma or less
- Some college or associate degree
- Bachelor's degree
- Master's degree or higher

Section 2: Technology Used by SMEs in Saudi Arabia

1. What type of technology is used in your current company?

(Check all that apply)

- CRM (such as HubSpot, Zoho)
- ERP (Such as Oracle, SAP)
- Cloud Computing Services (AWS , Google Cloud)
- Communication Software (Zoom, Microsoft Teams)

2. How frequently do you depend on these technology in your day ?

- Several times a day
- Once a day
- Several times a week
- Once a week
- Less than once a week

3. How has technology impacted your daily task?

- Increased efficiency in completing tasks
- Enabled remote work and virtual communication
- Provided access to a wider range of information and resources
- Facilitated collaboration and teamwork across distances
- Improved organization and tracking of tasks and projects

Section 3: Impact of Technology on Employee and Employers job

4. How does technology impact in evaluation the performance of team in the project?

- Positive impact
- Negative impact
- No impact

5. What types of technology used in your organization find most helpful ? (Check all that apply)

- CRM
- ERP
- Cloud Computing Service
- Communication Software
- Other (please specify)

Section 4: Technology-Related Issues in SMEs

6. How often do you come across technology-related issues in organization?

- Several times a day
- Once a day
- Several times a week
- Once a week
- Less than once a week

7. How does technology impact your opinion on the ability of AI to replace humans?

- Positive impact
- Negative impact
- No impact

8. In your opinion, what is the most significant technology-related issue in Saudi Arabia?

(Check all that apply)

- Lack of infrastructure for technology adoption
- Limited access to funding for technological innovation
- Limited access to skilled labor in the technology industry
- Limited government support for technology startups
- Limited awareness and understanding of the potential benefits of technology adoption in various industries
- Cybersecurity and data privacy concerns
- Other (please specify)

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