International Journal of
Technology and Systems
(IJTS)

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IPRJB

International Journal of Technology and Systems
ISSN 2518-881X (Online)
Vol.8, Issue 2, No.5, pp 82 – 99, 2023

www.iprjb.org

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Article History

Received 13th October 2023
Received in Revised Form 25th October 2023
Accepted 2nd November 2023

How to cite in APA format:

Alzaabi, D. (2023). The Impact of Technology and Digital Transformation on Innovation in the UAE. *International Journal of Technology and Systems*, *8*(2), 82–99. https://doi.org/10.47604/ijts.2170

Abstract

Purpose: The purpose of this research is to investigate the influence of technology and digital Innovation in the different sectors of the UAE. The study investigates the influence of technology in supporting Innovation and entrepreneurial activity among expatriates using a qualitative research technique. Rich qualitative data is obtained through several case studies and semi-structured interviews, offering insights into expatriates' perspectives, problems, and solutions interacting with technology improvements.

Methodology: This research investigates how technology and digital innovation affect expat growth and entrepreneurship in the UAE. It investigates the transformational influence of technology via qualitative approaches such as case studies and interviews, highlighting accomplishments and obstacles. The study adds to theory and practice by proposing methods for a more inclusive and innovative ecology.

Findings: The study's findings underscore technology's transformative role in expatriate growth and entrepreneurship in the UAE. The nation's commitment to research, innovation culture, and startup support has led to technology's integration across sectors. Notable success stories showcase innovation-driven startups reshaping traditional industries. Alongside these benefits, the study uncovers challenges such as the digital divide, data privacy concerns, and the imperative for ongoing skill development in the face of swift technological advancements. This highlights the need for a holistic approach to harnessing technology's potential for sustainable growth and inclusivity.

Unique Contribution to Theory, Practice and Policy: The significant contribution of this study is its thorough examination of the intricate link between technology, Innovation, and expatriate growth in the UAE. The study dives into the complexities of how technology-driven efforts affect expatriate entrepreneurs, providing findings that add to theoretical knowledge and practical implementations. The study's findings provide recommendations for establishing an inclusive and technologically sophisticated ecosystem that includes digital literacy efforts, diversified innovation support systems, and continual skill development. These findings have ramifications for policymakers, practitioners, and scholars who want to understand the intricacies of technology innovation and how it affects expatriate involvement in the private sector and entrepreneurship. This could be linked to the theory of disruptive Innovation, as the adoption of theories could lead to a promising economic future for the country.

Keywords: *Technology, Digital Innovation, Entrepreneurship, UAE, Startups, Innovation Ecosystem, Digital Literacy*

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INTRODUCTION

The global environment has seen a fast and revolutionary change in recent years, owing to technical breakthroughs and digital revolutions.[1]. As countries attempt to establish themselves as essential actors in the contemporary economy, the United Arab Emirates has emerged as a significant center for embracing these developments and utilizing them to drive Innovation across all industries. Technology and Innovation have become a cornerstone of the UAE's development strategy, driving its economic diversification, social growth, and worldwide competitiveness.[2]. The UAE's path to becoming a technologically proficient and inventive nation has been marked by ambitious government projects, smart investments, and a proactive commitment to implementing cutting-edge technology. With a focus on artificial intelligence, blockchain, renewable energy, and smart cities, the UAE seeks to establish an environment that welcomes and capitalizes on technology advancements to achieve unprecedented levels of Innovation and sustainable prosperity. In this environment, it is critical to investigate the influence of technology and digital transformation on Innovation in the UAE. Understanding how digital technology integration has altered the innovation environment can give insights into the processes that shape the nation's economic, social, and cultural fabric.

Statement of the Problem

A serious difficulty has evolved in UAE regarding the expansion and progress of expatriates in the private sector and entrepreneurship. Despite the UAE's image as a booming global business hub and its attempts to recruit varied talent, expatriates face difficulties in securing significant chances for professional progress and entrepreneurial success.[3]. This issue is exacerbated by restricted access to resources, cultural obstacles, and complicated rules, all of which prevent expatriates from fully realizing their potential and contributing to the country's innovation and economic development goals. Because expats constitute a sizable proportion of the UAE's workforce and entrepreneurial community, resolving this problem is crucial for maintaining a varied and inclusive business climate and maximizing the country's potential for Innovation and long-term economic success. As a result, this research aims to investigate how technology, Innovation, and digital transformation might be used to reduce the restrictions experienced by expats, thereby catalyzing their growth and engagement in the UAE's private sector and entrepreneurial environment. By investigating this issue, the research hopes to discover expatriates' unique barriers to accessing possibilities for growth and entrepreneurship in the UAE. It will also evaluate the possibilities for technical breakthroughs and digital Innovation to open new outlets and paths for expatriates to succeed. The research will examine whether technology-driven solutions may bridge current gaps, encourage inclusion, and enable expatriates to overcome challenges, changing them from passive participants to active players in the nation's economic and inventive endeavors. This study provided significant insights into the strategic integration of technology and Innovation to minimize the issues expatriates face through an analysis of best practices, case studies, and expert views. Hence, the gap identifies is that no study is found that could provide suggestions to governments, business leaders, and stakeholders on using digital transformation and technology innovation to foster expatriate development in the private sector and entrepreneurship.4. The study also aimed to contribute

[1] Zarrouk, H., El Ghak, T., & Bakhouche, A. (2021)
[2] Reuters. (2023, April 24).
[3] Mohammed, A. Q. (2019).
[4] Khatib, M. E. (2022).

to the wider conversation on inclusive economic growth and Innovation in the UAE, with the potential to create policies and initiatives that promote a fairer and prosperous future for all inhabitants, regardless of origin.

Research Aim and Objectives

- To identify the extent to which the adoption of digital technologies influenced the innovation landscape in the UAE.
- To analyze challenges hindering the synergy between digital transformation and Innovation in UAE.
- To evaluate the impact of adopting digital Innovation on the growth, competitiveness, and sustainability of startups in the UAE.

The study aims to dive into the complexities of how technology and digital transformation have catalyzed Innovation in industries such as banking, healthcare, education, logistics, and others through this research.[5]. We seek to present a complete knowledge of the variables that have contributed to the UAE's amazing growth into an innovation-driven society by studying this change's driving forces, impediments, and facilitators. Furthermore, this research will assess the alignment between technology adoption and the innovation agenda, emphasizing the impact of laws, legislation, and collaborative efforts on the outcomes.

Research Questions

- To what extent has adopting digital technologies influenced the innovation landscape in the UAE?
- What are the key challenges hindering the synergy between digital transformation and Innovation in the UAE?
- How does adopting digital Innovation influence the growth, competitiveness, and sustainability of startups in the UAE?

Significance of the Study

The study's relevance stems from its potential to catalyze a dramatic shift in the socioeconomic landscape of the UAE. The research may create inclusion, boost the UAE's global competitiveness, and contribute to a more varied and resilient economy by tackling the difficulties encountered by expatriates in the private sector and entrepreneurship via the lens of technology and Innovation. The study, which has ramifications for policymaking, economic practices, and social cohesion, can potentially improve the UAE's reputation as an innovative nation while supporting sustainable growth and human capital development for a more prosperous future.

LITERATURE REVIEW

Theories related to the Adoption of Technology

Disruptive Innovation Theory

According to Bernard, Zare, Sagot, & Paquin (2021), the theory of disruptive Innovation, which was proposed by Clayton Christensen, reflected that the target of new technologies and innovations are often niche markets that are often underserved. With time, the innovations could change and disrupt the already established markets, which could be challenging for the existing products in the market. Within the UAE, disruptive innovations have the power to

[5] Kamel, S. (2021).

reshape and improve the operation of industries through the introduction of novel technologies and innovative models of business6. Efforts of digital transformation within the UAE would also lead to the creation of opportunities for emerging businesses and startups, which could further lead to the disruption of traditional sectors, including healthcare, transportation, finance, etc.

Technology Adoption Lifecycle

Everett Rogers' theory of technology adoption lifecycle categorizes potential adopters of innovation, including innovators, the early adopters, the early majority, the late majority, and the laggards7. The theory reveals that there is a diffusion of Innovation through society, which has a predictable pattern. Determination of the position of the country in terms of adopting the latest technologies could be helpful for policymakers and businesses for further decision-making and designing strategies8. For example, early adopters within the UAE are likely to be more open to experimentation with technologies that are cutting-edge. This would increase digital acceptance within the various industries in the country, which will be ideal for digital transformation and Innovation. Further, the theory also aligns well with the SDGs and will be highly promising for the future of the country in terms of economic growth and development.

Resource-Based View Theory

According to Jay Barney and Birger Wernerfelt's Resource-Based View hypothesis, businesses gain and keep a competitive advantage by utilizing their special, priceless, and irreplaceable resources and skills9. This theory highlights how important it is to develop and use digital assets to promote innovation in the UAE. It means that for businesses and the government to stay competitive in the rapidly changing technology world, they should place a high priority on developing digital competencies (Azionya & Nhedzi, 2021). This theory offers significant insights into how digital transformation and technology encourage innovation in the UAE. It also provides useful guidance for businesses, researchers, and policymakers to understand the intricate nature of innovation in the digital age and develop strategies that effectively capitalize on technological advancements.

Institution-Based View Theory

The theory of the Institution-Based View, developed by scholars such as Edward Peter Stringham and Scott E. Masten, emphasizes the critical role that both formal and informal institutions play in influencing business practices and spurring innovation (Azionya & Nhedzi, 2021). Within the framework of the UAE, this theory assumes great importance. The UAE has a distinct institutional system that combines Islamic law, modern regulatory frameworks, and customary practices. These elements significantly influence how markets operate, how businesses operate, and how societal norms are formed 10. The Institution-Based View theory suggests that recognizing this uniqueness is an important first step in promoting innovation. Furthermore, companies need to make sure that their initiatives comply with local rules and regulations if they want to effectively promote innovation in the UAE. Understanding the legal and regulatory landscape cannot only be important for maintaining compliance but also for identifying areas where creative legal practices are able to be implemented (Bernard, Zare,

[6] (Bernard, Zare, Sagot, & Paquin, 2021)
[7] (Akkas & Altiparmak, 2023)
[8] (Akkas & Altiparmak, 2023)
[9] (Bernard, Zare, Sagot, & Paquin, 2021)
[10] (Dawson, 2019)

Sagot, & Paquin, 2021). Companies are able to prevent legal entanglements and modify the way they operate to fit the local environment with the assistance of such alignment.

Impact of Technology on Innovation in UAE

UAE administration is aware of the significance of Innovation and technology in improving the nation's economy's productivity, growth, and prosperity[11]. Considering the impact of technology on Innovation, the UAE has been aggressively trying to accelerate research and development (R&D) (Alrahbi, 2021). The Masdar Institute of Science and Technology, Mohammed bin Rashid Space Centre, and Robotics and Artificial Intelligence Laboratory are among the many of the research and technological centers that the UAE has built.[12]. For individuals to work together on innovative initiatives and technologies, these centers bring scientists, researchers, and specialists together. UAE has made significant investments in STEM (Science et al.)-related education and advancement of talent. The authorities have started initiatives to encourage research scholarships, develop local talent, and draw outside specialists to participate in research and development initiatives. The UAE recently established technological parks and free zones that offer an atmosphere that is favorable to Innovation, research, and development. To attract technological businesses, startups, and research institutions, these zones provide incentives like tax reductions, research facilities, and simplified rules. To achieve its goal of ranking among the most innovative nations in the world, the UAE created its National Innovation Strategy. The strategy's main objective is to promote Innovation in essential sectors like technology, healthcare, education, energy, and transportation. It highlights the value of research and development and collaborations between the public, business, and academic sectors. UAE constantly communicates knowledge, skills, and best practices with its foreign partners, which include educational institutions, research organizations, and technological companies (Bernard, Zare, Sagot, & Paquin, 2021). This partnership speeds up Innovation and enables the transfer of technology. Initiatives in R&D are supported by financing and grants from the UAE administration. Startups, academics, and innovative projects in industries including healthcare, renewable energy, and space exploration access several funding programs. UAE has set in place rules and regulations that encourage Innovation while guaranteeing the security and safety of consumers. While launching them on an extensive basis, innovative products and services are tested by businesses in legal sandboxes.[13]. UAE has made considerable progress in accelerating R&D and maximizing the influence of technology on Innovation. The nation has established itself as a regional innovation powerhouse owing to the government's dedication to fostering a climate that is favorable for study, cooperation, and the implementation of modern technologies.

UAE has been consistently encouraging Innovation, entrepreneurial spirit, and tech-driven ideas. Fostering a culture of Innovation is essential for the economic growth of any nation. The authorities of the United Arab Emirates have introduced numerous initiatives and programs to aid startups and promote entrepreneurship. These include free zones like Dubai Silicon Oasis and Dubai Internet City, which provide tax advantages and an atmosphere that is advantageous for tech enterprises. For startups, the UAE offers a variety of funding sources. Promising enterprises get funding from public sources like the Mohammed bin Rashid Innovation Fund

[11]Issa, N. S., & Al Abbar, S. D. (2015).
[12] Ameen, A. (2019).
[13] Elrawy, W. (2022).

(MBRIF) and private investment companies.[14]. The UAE is home to many accelerators and incubators that offer companies mentoring, office space, and opportunities for networking. Examples are Hub71 and in5 Innovation Centers. To make operating for startups less complicated, the UAE administration has implemented regulatory amendments. These initiatives include steps to simplify registering a company and lessen paperwork requirements. Institutions, both public and commercial, are funding educational initiatives that support Innovation.

Challenges and Considerations Faced by UAE

The UAE has made considerable progress in adopting technology and digital transformation, but just like any other country, the UAE has faced issues relating to the digital divide and guaranteeing inclusiveness in a quickly changing technological context. The digital divide is a gap between people who have access to digital technologies and those who do not. Providing equal access to technology to all parts of society is of the utmost importance for achieving equitable development and reaping the full advantages of digital transformation. The main issues are regarding the disparities in infrastructure, which is a challenging thing to deal with for the country. While the UAE's major urban areas have solid digital infrastructure, rural and remote locations have limited access to high-speed internet and other technological capabilities. It becomes critical to bridge this infrastructure gap to ensure equitable opportunities for all residents, regardless of their geographical location. Another issue is regarding the affordability of technologies.

As the country has adopted technology and digital transformation, one of the most pressing challenges is to guarantee data privacy and cyber security. To develop trust among residents, businesses, and other stakeholders, it became critical to balance innovation and the security of sensitive and private information. To overcome these issues, the UAE has created regulatory frameworks to deal with adverse situations. The country has focused on establishing strong data protection rules and regulations. With the implementation of the UAE Data Protection Law in 2020, the UAE has taken steps in this direction. To strike the correct balance between encouraging Innovation and protecting individuals' personal information, a thorough and up-to-date legislative framework is created in the country. To safeguard privacy, the UAE has also created a Data Localization law. Certain types of data are stored and processed within the country's boundaries, according to data localization rules. While such policies improve data sovereignty and cybersecurity, they also stifle data flow and Innovation if not applied appropriately. It is critical to equip the workforce for jobs in the digital era as the UAE undergoes fast digital change. This entails providing individuals with the skills and knowledge required to prosper in a technology-driven economy. To do so, the UAE has created a few strategies to overcome the scenario. They have created an emphasis on Digital skills. According to the demands of this digital era, the UAE has created scopes for better digital literacy along with learning procedures regarding coding and data analytics. There is also a focus on artificial intelligence and skill training regarding cyber security.

Digital Transformation and Startups in UAE

The United States of Arab has seen rapid advancement in the field of technology and digital transformation in the last few decades.[15] This advancement in technology has made a massive

[14] Sindakis, S. (2022)
[15] Mohamed Hashim, M. A., Tlemsani, I., & & Matthews, R. (2021).

impact on various aspects of society, which include education, the economy, healthcare, and many more. The most noticeable outcome of this tech has an intensive impact on shaping the Innovation of UAE. With the use of these technologies, the country has fostered immense growth in its startup system.[16]. It has helped by increasing the number of entrepreneurs and innovators who are willing to launch their businesses across various sectors. The UAE government has created massive support for various startups, which are followed through innovations. Business bodies such as Dubai Future Foundation have been found instrumental in fostering innovations along with providing necessary resources in the early stages of startups.[17]. The availability of venture capital and funding has created opportunities for startups in the UAE, as the government has recognized the importance of supporting those innovations. For example, the startup of a business became simple and easy with the help of the government, which engaged more entrepreneurs to settle their business in the UAE. The rise of startup competitions, pitch events, and fundraising platforms has made it easier for entrepreneurs to obtain investments. These channels allowed startups to present their ideas and breakthroughs to potential investors, boosting their chances of obtaining the funding needed to build their firms. Along with this, the government has made specialized zones and free trade zones, such as Dubai Internet City and Abu Dhabi Global Market, which had been formed to attract technology-focused companies, with a variety of incentives and perks on offer. The UAE had prioritized commitments to digital transformation and Innovation, as well as providing a supportive atmosphere, venture capital availability, and reduced laws, all of which had a substantial impact on the expansion of the country's startup ecosystem.

Role of Technology in Scaling Startups

Technology was critical in UAE startup growth. They provide the tools and capabilities needed to efficiently expand their business and gain access to the global market. Accessing the global market by using digital platforms and adopting cloud computing are two critical features that have mainly contributed to the growth of startups in the country.[18]. The UAE's strategic location and well-established infrastructure made it a perfect entryway to regional and worldwide markets for businesses. The traditional ways of expanding into international markets, on the contrary, can be costly and time-consuming for startups.[19]. Technology has changed the environment by providing digital channels that allow businesses to reach customers all over the world with relatively little effort. Digital platforms have democratized access to the global marketplace, allowing companies to open online stores and offer their goods or services to people all over the world. This eliminated the need for several physical presences and lowered the hurdles to entrance into overseas markets. Technology has helped to enable startups to use digital marketing strategies such as advertising over social media, search engine optimization (SEO), and content marketing to reach a worldwide audience at a lower expense compared to traditional advertising methods. On the other hand, computing has also influenced the structure, creating scopes for better business in the UAE. Cloud computing and SaaS solutions have transformed the way entrepreneurs work by enabling them to scale their firms quickly and affordably.[20]. Cloud computing gave options to companies that can access unlimited and adaptable computing resources, which allowed them to handle rising workloads and user needs

[16] Nuseir, M. T., Aljumah, A., & Alshurideh, M. T. (2021).
[17] Schilirò, D. (2021).
[18] El Khatib, M. M., Ahmed, G., & & Al-Nakeeb, A. (2019).
[19] Gupta, V., Rubalcaba, L., & & Gupta, C. (2022).
[20] Kishor, K. (2023)

without making large upfront expenditures on physical infrastructure. It has even been noticed that the startup is incorporating cloud computing into its business and has been able to reduce its capital investments over the maintenance of physical servers and hardware.

Research Gap

While considerable research has focused on the adoption of digital technologies in the UAE, there is a noticeable gap in comprehensively understanding how these technologies have influenced the innovation landscape in the country. Previous studies were found to touch upon the benefits, but a deeper analysis is needed to determine the full extent of this influence and the specific areas where digital technologies have had the most significant impact. Furthermore, there is a need for a more in-depth examination of the challenges that hinder the effective synergy between digital transformation and innovation in the UAE. Existing research has acknowledged obstacles, but a comprehensive analysis of these challenges, their origins, and potential solutions is required to inform policy and strategy effectively. Moreover, while the impact of adopting digital innovation on startups in the UAE has been explored to some extent, there is a research gap regarding a holistic evaluation of how this adoption influences their growth, competitiveness, and sustainability. A deeper understanding of the various facets of this impact, including the specific digital innovations that drive startup success and the role of the UAE's innovation ecosystem, is needed to support startups in the region more effectively.

METHODOLOGY

Research Philosophy

The positivist research philosophy selected represents a methodological approach based on objectivity and empirical rigor. This methodology is consistent with the research's main purpose of investigating the complex interaction between technology, Innovation, and expatriate growth in the UAE's private sector and entrepreneurial scene.[21]. The project aims to uncover measurable trends and correlations that might yield actionable insights for both policymakers and industry stakeholders by prioritizing objective data gathering and analysis. The study's methodology is to provide a factual foundation that not only improves academic debate but also empowers strategic decision-making in the UAE to build a climate suitable for expatriate growth, technological Innovation, and long-term economic development.

Research Approach

Given the study's focus on the impact of digital Innovation in the UAE, the chosen inductive research technique is well-matched.[22]. An inductive method allows for a thorough analysis of the complexities involved in the study, which tries to evaluate the transformational implications of technology and digital innovation across diverse sectors. By gathering concrete instances and examples of the influence of digital Innovation, the researcher might identify nuanced patterns, emergent themes, and unanticipated linkages that would otherwise be missed using a deductive method. The exploratory nature of understanding how digital Innovation influences the UAE's economic, social, and cultural landscape is aligned with the inductive approach, ensuring a holistic and data-driven perspective that contributes valuable insights to the discourse on technological progress and its implications.

[21] Herodotou, C., Hlosta, M., Boroowa, A., Rienties, B., Zdrahal, Z., & Mangafa, C. (2019)..
[22] Jafari-Sadeghi, V., Garcia-Perez, A., Candelo, E., & Couturier, J. (2021).

Research Design

The descriptive study approach adopted is well suited to providing an accurate and thorough depiction of the present condition of expatriate growth in the UAE's private sector and entrepreneurship, particularly in the context of technology and Innovation. This architecture allows for a thorough examination of the phenomenon without adding purposeful manipulation of variables, resulting in an unbiased portrayal of reality. The research can capture the rich, contextualized information needed to understand the complicated relationship between expatriate development, technical breakthroughs, and Innovation by gathering data using methodologies such as case study analysis and qualitative interviews. The descriptive approach's emphasis on presenting things as they will help to develop a more nuanced understanding of the influence of technology and Innovation on expatriate engagement in the private sector.

Data Analysis

The thorough investigation of several case studies will be the major data-gathering approach for this project, which will delve into the experiences of expats in the private sector and entrepreneurship inside the UAE, with a special focus on the influence of digital Innovation. This strategy was chosen because of its ability to provide in-depth insights and comprehensive comprehension of the topic matter. Each case study will include a careful selection of expatriates who have faced and negotiated the interplay of digital Innovation in their professional lives. Participants will be invited to discuss their experiences, problems, accomplishments, and strategies linked to technology-driven growth through semi-structured interviews. Furthermore, document analysis will supplement interview data by allowing the researcher to confirm results and validate narratives using documentation such as company plans, digital strategies, and performance indicators. This triangulation of data sources improves the study's credibility and dependability. The case study analysis method's capacity to capture real-world complexity and produce insights that can influence both theoretical knowledge and practical implementations justifies its use. As the UAE's technology ecosystem continually evolves, this methodology allows the study to adapt to the changing environment and identify emergent patterns that standard survey methodologies may miss.

Ethical Considerations

This study will prioritize ethical issues, with a commitment to protecting participant rights and data integrity. Stringent safeguards will guarantee that participants' identities are kept private, establishing a trusting atmosphere. Protocols for informed consent will be followed to ensure that participants fully understand their engagement. Rigorous procedures will be taken to reduce any biases and maintain research integrity. Participants shall maintain open communication, establishing mutual respect.

Findings and Discussion

Success Stories of UAE-Based Startups Leading in Innovation

With the use of innovations, there are plenty of companies and startups that have created a fortune in their businesses. Companies such as Careem, which was started in 2021 in Dubai, had a ride-hailing platform and quickly expanded across the Middle East. And South Asia. The startup transformed the region's transportation market by providing convenient and dependable ride-hailing services. Uber paid $3.1 billion for Careem in 2019, making it one of the largest purchases of technology in the Middle East. Along with this, the company called Fetchr is also

a Dubai-based company which has been found in 2012 and has made a fortune by using technology-driven policies. It was a logistics startup that pioneered new methods to tackle last-mile delivery difficulties. They used GPS-enabled smartphone apps to locate consumers who did not have traditional addresses, allowing for efficient deliveries around the region. Fetchr attracted a lot of attention and investment, demonstrating the power of technology in enhancing logistics and delivery services in the UAE. Wrappup is also a UAE-based firm formed in 2015, which has created an innovative AI-powered smartphone app for meeting notetaking. The program employs speech recognition and natural language processing to automatically capture meeting highlights and provide summary notes. Wrappup was acquired by Cisco in 2018, recognizing the potential of its solution to improve productivity and collaboration.

Case Studies of Companies Transformed by Innovation

Firstly, in the UAE, Abu Dhabi Customs is an important example of digital transformation. To enhance effectiveness in trade and customs activities, companies have adopted several technology-driven projects. To enable companies and individuals to gain remote access to custom-related products and data, Abu Dhabi Customs generated a digital site that provides a variety of online services. As a result, fewer in-person trips to customs offices are required, and the clearance procedure is made easier.[23]. To speed up the clearance of products, the customs administration has made investments in automation and digitization. Organizations and customs communicate using electronic data interchange structures, which reduces paperwork and delays. Artificial intelligence and data analysis are used in technological advances to discover and evaluate possible risks related to trade transactions. This makes risk-based assessments more effective and reduces delays for compliant shipments.

Secondly, one of the largest and most recognized banks in the UAE is Emirates NBD. In adopting technologies to improve its financial services, it has come a long way. With mobile applications and online websites, users can manage their finances, transfer payments, pay bills, and utilize a variety of banking services because of Emirates NBD's reliable digital banking platforms. The bank has incorporated catboats with AI into its customer support department. These catboats offer a 24/7 service channel and serve clients with inquiries, details about their accounts, and even simple transactions.[24]. Emirates NBD has investigated the possibilities of blockchain-based technology for several use cases, such as trade financing and international money transfers. To increase the effectiveness and transparency of these procedures, they took part in blockchain groups.

Discussion

The Extent to Which the Adoption of Digital Technologies Influenced the Innovation Landscape in the UAE

The United States of Arab has seen a rapid advancement in the field of technology and digital transformation in the last few decades.[25]. This advancement in technology has had a massive impact on various aspects of society, which include education, the economy, healthcare, and many more. The most noticeable outcome of this tech has an intensive impact on shaping the Innovation of UAE. With the use of these technologies, the country has fostered immense growth in its startup system. It has helped by increasing the number of entrepreneurs and

[23] Zaabi, N. M. (2022).
[24] Khatib, M. E. (2022).
[25] Issa, N. S., & Al Abbar, S. D. (2015).

innovators who are willing to launch their businesses across various sectors. The UAE government has created massive support for various startups, which are followed through innovations. Business bodies such as Dubai Future Foundation have been found instrumental in fostering innovations along with providing necessary resources in the early stages of startups. The availability of venture capital and funding has created opportunities for startups in the UAE, as the government has recognized the importance of supporting those innovations. For example, the startup of a business became simple and easy with the help of the government, which engaged more entrepreneurs to settle their business in the UAE.[26]. The rise of startup competitions, pitch events, and fundraising platforms has made it easier for entrepreneurs to obtain investments. These channels allowed startups to present their ideas and breakthroughs to potential investors, boosting their chances of obtaining the funding needed to build their firms. Along with this, the government has made specialized zones and free trade zones, such as Dubai Internet City and Abu Dhabi Global Market, which had been formed to attract technology-focused companies, with a variety of incentives and perks on offer. The UAE had prioritized commitments to digital transformation and Innovation, as well as providing a supportive atmosphere, venture capital availability, and reduced laws, all of which had a substantial impact on the expansion of the country's startup ecosystem.

Key Challenges Hinder the Synergy between Digital Transformation and Innovation in the UAE

Despite advances in technology, the cost has remained a significant barrier for many individuals and households. Smartphones, laptop computers, and internet access can be too expensive, especially for lower-income individuals. Thus, it is critical to address the affordability issue to ensure inclusiveness and prevent increasing inequality. Digital literacy is another issue contributing to the challenges for Innovation in the UAE. Access to technology is simply one component of the solution. There is a much need to foster digital literacy and skill development across all social groups. Many people, particularly the elderly and those from disadvantaged communities, lack the necessary skills for effectively employing digital tools. Thus, bridging the digital gap and ensuring diversity in technology adoption is a complex undertaking process that needs a comprehensive approach that includes infrastructure development, affordability measures, digital literacy programs, and consideration of varied demands and cultural settings. As the reliance on digital technologies has widely grown, the risk of cyber-attacks has also increased. To protect key infrastructure, businesses, and individuals from data breaches and cyber-attacks, the UAE has invested in effective cybersecurity measures at both the national and organizational levels. The country has created strong incident response procedures to deal with data breaches, which is critical for providing security. Identifying and addressing security events as soon as possible has reduced the impact on individuals and enterprises, protecting public trust in digital services. As the UAE is serious about its privacy policies, they have strongly instructed businesses and organizations to open about how they acquire, process, and use data. Individual trust and compliance with data protection rules have been enhanced by clearly describing how data is handled and receiving explicit agreement from individuals.

Contribution of Adoption of Digital Innovation Influence on the Growth, Competitiveness and Sustainability of Startups in the UAE

Universities and other organizations provide students with training programs, seminars, and courses to help them develop their entrepreneurial abilities. The UAE holds a few international

[26] Issa, N. S., & Al Abbar, S. D. (2015).

meetings and conferences centered around entrepreneurship, Innovation, and technology. Startups can present their ideas and network with possible investors and collaborators at conventions like GITEX Technology Week. Regardless of being a significant oil producer, the UAE has made significant investments in renewable energy. A good example is the Masdar City project in Abu Dhabi, which focuses on the study of renewable energy sources and urban sustainability. UAE wants to create technologically advanced cities that will enhance living conditions and productivity[27]. Projects like Dubai's Smart City initiative put a strong emphasis on utilizing technology and data to improve various urban functions. To try to lessen the negative effects of automobiles on the environment and improve traffic management, the UAE is investigating technologies like autonomous and battery-powered cars.[28]. To offer innovative and easily accessible healthcare services, the UAE has made investments in healthcare technology, particularly telemedicine, portable health devices, and AI-driven diagnostics. An increasing tech-driven ecosystem is the result of the UAE's efforts to encourage an entrepreneurial spirit among its youth and support companies. These firms are actively working on advanced solutions to traditional problems, especially in fields like renewable energy and smart city development, demonstrating the nation's dedication to technical improvement and sustainable growth.

CONCLUSION AND RECOMMENDATION

Conclusion

The findings of the study illuminate the profound impact of technology and digital Innovation on the United Arab Emirates (UAE), shaping various facets of its society, economy, and culture. Recognizing the significance of Innovation and technology, the UAE has undertaken aggressive efforts to accelerate research and development (R&D), evident through initiatives like the Masdar Institute of Science and Technology and the National Innovation Strategy. These initiatives have fostered collaborations among scientists, researchers, and specialists, positioning the UAE as a regional innovation powerhouse. The nation's dedication to fostering a culture of Innovation has spurred the growth of a vibrant startup ecosystem supported by funding sources, incubators, and favorable regulatory amendments. The transformational potential of cloud computing and digital platforms providing global market access demonstrates the significance of technology in expanding companies.[29]. Notable success examples, such as Careem's disruption of transport services and Wrappup's AI-powered note-taking software, highlight the amazing impact of innovation-driven businesses on a wide range of industries. However, the analysis shows important obstacles that the UAE faces. The digital gap remains, with differences in infrastructure impeding egalitarian access to technology. To ensure digital inclusion, cost challenges must be addressed, as well as digital knowledge across varied populations. It is critical to balance Innovation with data privacy and cybersecurity, and the UAE's legal frameworks and incident response systems show its commitment to protecting personal information. Another significant issue is preparing the workforce for the digital era, with the UAE prioritizing skill development in areas such as artificial intelligence and cybersecurity.

[27] Kamel, S. (2021).
[28] Mogielnicki, R. (2023).
[29] Heiets, I., La, J., Zhou, W., Xu, S., Wang, X., & Xu, Y. (2022).

Limitations and Future Scope of the Study

While the study provides useful insights into the influence of technology and digital Innovation on expatriate growth in the private sector and entrepreneurship in the UAE, it has certain limitations. To begin, the study's scope is confined to a specific setting of the UAE, concentrating solely on expatriate experiences inside this country.[30]. This may limit the findings' generalizability to other nations or areas with unique socioeconomic and cultural situations. Furthermore, the study's concentration on expatriate growth may overshadow the broader impact of technology on many sectors of the UAE economy, thereby restricting its thorough evaluation of technological influence.

Several routes for future research should be considered to solve these shortcomings and further increase the study's contributions.[31]. For starters, broadening the scope to include a cross-sector examination might give a more comprehensive picture of technology's revolutionary potential. Investigating the impact of technology and Innovation across areas such as healthcare, education, energy, and transportation will offer insight into the UAE's economy and society. Longitudinal studies undertaken over a long period of time may also provide insights into the evolution of technology's influence.[32]. Such research would allow for the detection of long-term patterns, shifts, and changes in the link between technology, Innovation, and expatriate growth.

Recommendation

- The findings of the study emphasize the necessity of resolving the digital gap by emphasizing digital literacy and equitable access to technology.[33]. The UAE should make concerted efforts to improve digital literacy across all segments of society. Initiatives that focus on teaching people about digital tools, online safety, and using technology for personal and professional advancement may empower people from all walks of life. Furthermore, giving cheap technology access through community centers, libraries, and educational institutions may bridge the divide and guarantee that technological advantages are available to everybody.
- While the study highlights the significance of cultivating a culture of Innovation, it is recommended that the UAE expands its innovation support beyond technology-centric domains. By offering incentives, funding, and mentorship to startups and innovators across a wide array of sectors, the UAE can foster a more diverse and robust innovation ecosystem. Encouraging collaborations between traditional industries and emerging technology sectors can lead to novel solutions that address complex challenges and drive holistic societal progress.
- To address the issues of workforce adaptation, continual skill development that is matched with the needs of the digital era is required.[34]. Collaboration with educational institutions, industry experts, and international organizations can aid in the development of appropriate training programs and certifications.[35]. Furthermore, through building global relationships and networks, the UAE's commitment to Innovation may be amplified. Collaborations with

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top global innovation centers, research institutions, and multinational enterprises will promote knowledge, expertise, and best practices sharing, placing the UAE as a significant participant in the global technology and innovation scene.

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