

THE IMPACT OF INFORMATION AND TECHNOLOGY ON BUSINESSES IN RECENT TIMES

Dr. Amiya Bhaumik*, Wang Lizhu, Liu Limin, Chang Meng, Choo Chuan Sin, Chen Yiru

*Corresponding Author, Lincoln University College, Malaysia
amiya@lincoln.edu.my

ABSTRACT

History has observed that mankind went through countless revolutions. The newest one is the revolution of information and communication technologies. This revolution generated a breach between everything that is old; what is deemed fresh today is rapidly changed into an old and outmoded trend tomorrow. Because of these evolutions, the need for this technology has risen. Therefore, the latter has become the most significant utilised resource compared to traditional resources, which has led to the amplification of interest in new information and communication technologies by both corporations and people.

At now, the globe is experiencing a quick evolution process in the requirement for information facilities in terms of quantity, quality and access to information, in order to make the best choice based on the varied changes and dynamics of the organisations environment. This indicates clearly the rising relevance of information systems and their capacity to serve the demands of companies information. This underlines the significance to build these systems and to boost their efficacy and efficiency. One of the important factors of the success of these systems is that they have grown reliant on sophisticated technologies that have substantially eased access to information and dramatically lowered access costs.

Because of advances in technology, the telecommunications industry has seen a major shift in a short time. By relying on information and means of delivering that information as quickly as possible while still keeping prices low, it has become a critical component of the knowledge economy. Companies face a new difficulty due to the rapid growth of this sector and the impact it has had on all sectors, particularly in light of the usage of satellite, mobile phone, and the Internet, which has placed them in front of a new task.

No one can deny that information technology has had a significant impact on human existence throughout the past century as a fundamental and revolutionary revolution. Indeed, information and communication technology has merely been used in every facet of our lives, and it's far from a fad or a fleeting fad. This policy has been implemented in every area, making it easier for both the organisation and its employees to accomplish their goals.

Thanks to modern information technology, the world has shrunk to the size of a village. Human life has been profoundly impacted by the rapid spread of information and

communication across the globe, which has resulted in a fundamental shift in society. The world now depends entirely on technology, knowing that this technology carries a significant enough risk to destroy society. Which leads us to wonder exactly what the new technologies of information and communication consist of? What impact do they have on people's day-to-day lives and on the various aspects of life, such as the economy, politics, and social?(Iesc, 2018)

Keywords: Information Technology, Business, Telecommunications

INTRODUCTION:

The term "information technology," commonly abbreviated as "IT," refers to “the science and activity of using computers and other electronic equipment to store and send information” (Dictionary, 2022)

Many fields of public health, including vital statistics, investigation and research, surveillance, epidemiology, surveys, labs technology, maternity and child health, and environmental health, employ information technology (IT) to fulfil their aims and objectives. IT comprises the use of computers and communications, and the translation of data into information and knowledge (Encyclopedia.com, n.d.)

Data storage, retrieval, analysis, transmission, manipulation, and transmission are all part of the scope of information technology (IT). ICT (information technology) is a mix of hardware and software that is used to accomplish a wide range of vital daily operations. Most IT experts work with an organisation to show them what current technology is available to execute their necessary duties, then incorporate that technology in the setup or create an entirely new setup in order to satisfy their demands technically. In today's environment, the reach of information technology is understated. Information Technology has a significant impact that many people don't realise. The Harvard Business Review article from 1958 discusses the three main components of information technology: computing, decision support, and business software. Networking, hardware, software, the Internet, and individuals who work with these technologies are all examples of information technology.

There are IT departments in many firms today to deal with computer systems, networks, and other technological aspects of the company. Programming languages, network administration, web development and technical assistance are just few of the IT careers that may be found. Information technology has become an integral component of our everyday life since we live in a "world of information." It is expected that many organisations would establish "IT departments" in the next several decades in order to handle computer technologies that are relevant to their operations. (Class, 2021)

There are two types of people in the global economy: those who make and those who buy. If there isn't someone in between these two, the company won't exist or be profitable. Products are sold only if consumers buy them, thus manufacturers must meet their customers' demands. People go to the market to purchase what they need from manufacturers, and

manufacturers sell their products at the market. Since the beginning of business, when technology was still in its infancy, there have been many instances of this. The development business system is affected by advances in technology. If you don't keep up with the latest advancements in information technology, you'll be left behind. In addition to enhancing the quality of life for individuals, advances in information technology also help to fuel global commerce. Things that used to be costly and time-consuming may now be completed in a matter of days. One person can do a job that would have required 10 workers in the past. (Shaqiri, 2015)

There are several ways in which information technology (IT) may be used in online business transactions, such as via providing media facilities like the internet. Customers may choose their desired products from a variety of options on the websites and applications they use. The internet company also necessitates the use of a variety of other technologies, such as telecommunications, banking, media, and delivery agencies like the post office, in order to facilitate payments from customers. You may use these technologies to help your internet company grow and succeed. Since of the role and impact of IT, internet commerce is a fantastic success because it is efficient, inexpensive, and speedier for both the producers and the customers (Steenhuis& De Bruijn, 2012). The impact of information technology on human lives cannot be overstated. Technology's growth is now progressing in tandem with the development of society. Because of the rapid advancement of information technology, more individuals are turning to it for their businesses. It's certain that doing business online will become more commonplace in the future. Relatively popular and well-developed, they have become quite ordinary. Citizens may easily get the products and services they are looking for via an internet company. The growth of online commerce is influenced in certain nations by the rising availability and low cost of internet connections. As a result, this has a positive impact on the growth of internet businesses.

Humans can produce, alter, store, communicate, and disseminate information via information technology. Data, audio, and video can all be sent at rapid speeds thanks to IT. Personal computers (laptops), televisions, electronic appliances, and current portable gadgets like smartphones are also examples of IT. The progress of tools is important and supportive of business operations, but it does not come cheap; in addition, technical advancement should be supported by facilities and infrastructure in the region or location where the organisation is conducting commercial activities. (Mgunda, 2019)

BACKGROUND OF THE STUDY:

The usage of technology in the workplace has been around for a long time. In the early days of technology, pioneers were among the first to apply it for business. For irrigation and farming, they began using scratch ploughs, which allowed them to produce more food than they needed. They traded in the extra fruit they had on hand. A noteworthy technical accomplishment for the period was the usage of the scratch plough, since at the time people were accustomed to hunting animals and raising their own food. Technology's debut in business was a huge success, as can be shown below. Early in the nineteenth century, a spike in technical progress may be traced back to this time period. Innovations and tools for

conducting business were introduced during this time period. They were able to do more in less time and discover new business opportunities as a result of this. The technological advancements that had an effect on the economy throughout this era had a huge impact on the way people lived. People's subsequent embrace of these technical developments cleared the path for the application of additional technologies for economic purposes. Eventually, it was during the industrial revolution that technology had a major impact on business and economics. In this period, individuals began to realise the importance of technology in their commercial endeavours, Electricity and the telephone, for example, were quickly used to speed up commercial procedures. For companies, the discovery of electricity offered a stable supply of energy that could be used to power their operations. Contrary to this belief, the development of the telephone greatly enhanced communication between businesses and their customers. Both of these findings had a significant impact on business and are now found in almost every organisation. (C, 2018)

There was a start with the massive calculators, which could digitally modify numbers, and the business developed to incorporate other transaction-oriented activities, such as airline reservations. All computer-related activities prior to the 1980s, on the other hand, were centred on human-computer interactions. That wasn't changed by the first PCs. A desktop mainframe was all that a personal computer was. A large part of the growth in business data and in the digitization of home-based leisure activities may be attributed to an explosion in productivity software for people. As soon as workstations began to be connected through short-distance LANs (where Ethernet became the norm) and then long-distance WANs, I believe that a significant numerical and qualitative leap had occurred (WANs). You still had to use a PC to print and make paper copies of the memo you had previously written using a typewriter. There has been a massive growth in the number of messages being sent, archived, and transmitted due to the widespread use of computer networks and email. It was the introduction of the World Wide Web (commonly referred to as "the Internet") that signalled the beginning of a new era in computer technology's development. With the proliferation of new apps, business-related activities were no longer the only ones that were being digitised. Many tools were provided that made it easy for anybody with an Internet connection to produce and share content (the open and almost free wide area network only few people cared or knew about before the invention of the World Wide Web). As long as they have an internet connection, even people I've never met on the other side of the planet may view work notes that were formerly only available in paper form on typewriters. The Globe Wide Web has connected billions of people all over the world in the same way that corporate computer networks have. When individuals can communicate and exchange information in real time, data generation, storage, mobility and consumption all increase significantly.. New players emerged, all of whom saw "IT" as more than just a function for managing infrastructure; rather, they saw it as the heart of their business, with data and the analysis of that data as their competitive edge. This is in line with what came before it. (Press, 2013)

PREVIOUS RESEARCH:

According to (Iesc, Impacts of information technology (IT), 2018) Science, education, and the economy all benefit from various forms of technology. Scientists and technologists have a

strong bond of mutual respect. It should be mentioned that the foundation of technology is the study of science and the application of (IT) innovations in all facets of life in order to satisfy the demands of people and society alike. Because of this, governments, businesses, and society work together to devise methods to improve the quality of life for people.

A study by (Mgunda, 2019) Companies should enhance their services and be inventive in employing information technology in their business in order to generate a supernormal profit, expand, and develop, according to this author's recommendation.

In addition to it, a study by (Lindh, 2008) Companies should enhance their services and be inventive in employing information technology in their business in order to generate a supernormal profit, expand, and develop, according to this author's recommendation.

Another study by (Wilburn, 2018) Increasingly, businesses will engage with freelancers and independent experts through digital talent marketplaces. There will be new forms of association to support these new organisational structures, such digital freelancers unions and revised labour market legislation. It is crucial for legislators to ensure that workers may transfer their benefits between jobs, as well as to ensure that diverse kinds of labour and employment are treated the same under the law.

According to (Shaqiri, 2015) An intelligence network built on a new economic framework is taking shape, creating a new world. The growing usage of this technology has had a significant impact on the growth of Kosovo's small and medium-sized businesses (SMEs). When it comes to fostering new business models, the Internet and information technology go far beyond just facilitating human connection. They really change the way businesses are developed and shape the future of many industries. Using the Internet as a strategic resource may help firms advertise their products and services while also allowing them to enter new markets. This new technology may help businesses run more efficiently and gain a competitive edge. The economy, society, and politics have all been impacted by electronic commerce. This is the primary reason why businesses today are more focused on the market and meeting the needs of customers as competition heats up.

A study by (Jetter, 2008) Business models, structures, and corporate cultures must be adjusted in tandem with technological advances in order for an organisation to stay competitive in ever-shifting markets. IBM's transition into a worldwide, service-oriented corporation is an example of this. We view one of the most critical problems for firms as strengthening their capacity to notice significant changes and to react to them in a timely and consistent way as a consequence of the faster speed of ICT-driven change and shorter innovation cycles. Due to the slow pace at which business model and organisational changes, as well as cultural shifts, occur, it is understandable that CEOs are having difficulty adapting to rapid change.

Another study of (Duncan, 2021) In today's highly digitised world, it's probably fair to state that long-term corporate success is unattainable without using the advantages of information technology. From enhancing internal and external communications, inventory management, decision-making and database administration to employee/customer relationship management; the IT department has a hand in it all.

According to (Ibrahim, 2019) There are several advantages to using e-commerce in the acquisition of raw materials and in the transportation of those materials. E-commerce's may be greatly boosted by a variety of elements (such as technical expertise, the size of the company, and so on). However, further research may be carried out to learn more about the world of electronic commerce. The majority of research on e-commerce have focused on adoption factors, advantages, and challenges, according to a review of the literature. More research is required in other areas, such as productivity and cost, for example. Recently, ERP has become a popular ICT application. ERP was shown to have a favourable relationship with capital and labour productivity. However, a correlation between ERP and mass customisation was shown to be negative. This is an incongruous outcome. Because mass customisation required both labour and capital, it may be considered a kind of labour and capital productivity. As a result, more research on the words' relationship is required. ERP's success characteristics have a mixed outcome. There are some who believe that top management's backing is critical, while there are others who believe that top management is irrelevant. This problem may be clarified by doing a study in this area.

A study by (Nikoloski, 2012) small firms are making significant investments in IT in order to take advantage of the particular capabilities established in their industries and gain a competitive edge. As a result, a company's overall performance is enhanced when the business strategy and information systems strategy are in sync.

According to (Lawlor, 2008) It's no secret that the global market is becoming more equal as more nations and individuals make their resources accessible to the global marketplace. They are on the verge of becoming big players in the global arena because of globalization's effect on their economy and their ability to compete. As the pace of communication speeds up, the number of players on the global stage grows, and organisations will face new issues as a result. It is now more important than ever for organisations to be able to react swiftly and adapt to the ever-changing global business environment that awaits them as globalisation deepens and grows. An company must constantly develop new business processes to take advantage of emerging trends and events in order to stay competitive. If a company wants to retain a competitive edge over its rivals, it must constantly produce new goods and services that are both original and inventive. Business leaders have no idea where globalisation will take them, but one thing is absolutely certain: globalization will not go away, and companies must adapt.

Another study of (EATOCK) Improved systems and procedures may be developed using information technology (IT) rather of relying only on automation. To simulate information systems, one must first consider how to represent information inside the simulation. Simulation models must include this essential component since it is the most critical portion of an information system. As a result of designing both the computer network model and the business process model concurrently, changes in the IT infrastructure may be mirrored in the business process model and vice versa, allowing for information to be exchanged between the two models. As the models get more complicated, the technique has to be refined to take into consideration these limitations and how to include information that is more intangible into the models.

A study by (Ilham et al., 2021) There is a link between the capital's information technology capabilities and its performance. A comprehensive examination of the literature shows that information technology capital has a considerable impact on an organization's success. Convergence between Information Technology and Performance Capital is defined by this research as a convergence axis that includes articles in both fields. how each decade's literature contributes to our collective knowledge pool. As far as applications go, identifying significant themes related to IT capital and performance helps researchers better comprehend the issue and broader context while also pointing up study needs. As a result of all of this, new research may be conducted to help close the knowledge gap in the area of information technology. It's clear from the most explored topics that capital information technology and performance research has had an impact on the fields of innovation, information technology, and management. According to the findings of this literature analysis, information technology capital plays an important role in enhancing the link between firm performance and profitability. Increases in information technology capability thereby boost organisational learning capacities, which have an impact on business performance.

METHODOLOGY:

Data for this research was collected through secondary data obtained from Internet World Stats, Digital market outlook, international communication union (ITU) and other data this paper are from the literature study and library research. The use of a checklist to gather multiple data was appropriate because of the importance of many information concern factors, such as business, the internet, and information technology.

RESULTS AND DISCUSSION:

Many businesses and organisations rely heavily on their information systems, which are made up of several components such as hardware, software, human resources, and a network. These pieces of equipment may help enhance productivity, efficiency, and effectiveness on the job, as well as contribute to the organization's overall objectives. Several commercial possibilities have been established as a result of specialists and practitioners being able to explore internet technologies via the use of corporate information systems (CIS). There was never a pause in the commercial activity of numerous firms in the 1990s when the internet became a business facility. As long as you have an Internet connection, you may do business with virtual stores at any time. E-business is the result of businesses employing information technologies and the internet to do business. Since last year, the number of internet users has surpassed 3.65 billion, or 3.9 billion (ITU, 2018). According to internet world numbers, Asia has the most internet users in the world. In Asia, more than 2 billion individuals have access to the web. As a result of this, the majority of Asian businesses use the internet to conduct commercial operations such as bill payment, money transfer, information sharing, and communication. According to comScore, Europe has more than 700 million internet users as of 2018, whereas Africa had more than 450 million internet users. Internet usage is lower in the Middle East and Oceania/Australia area.

Table 1: Internet Users in the World (In Millions)

Year	Asia	Europe	North America	Latin America/ Caribbean	Africa	Middle East	Oceania/ Australia
2013	1265.11	566.26	300.29	302.01	240.15	103.83	24.8
2015	1563.21	604.12	313.86	333.12	313.26	115.82	27.1
2016	1792.16	614.98	320.07	384.75	339.28	132.59	27.54
2017	1938.08	659.63	320.06	404.27	388.38	146.97	28.18
2018	2062.14	704.83	345.66	438.25	455.84	164.04	28.44
2019	35,771,908	36,770,113	47,036,948	5,624,643	1,364,699,055	11,133,326	3,051,781
2020	119,239,694	122,567,044	15,67,89,827	1,87,48,810	4,548,996,852	33,39,998	1,01,72,604

Source: Internet World Stats

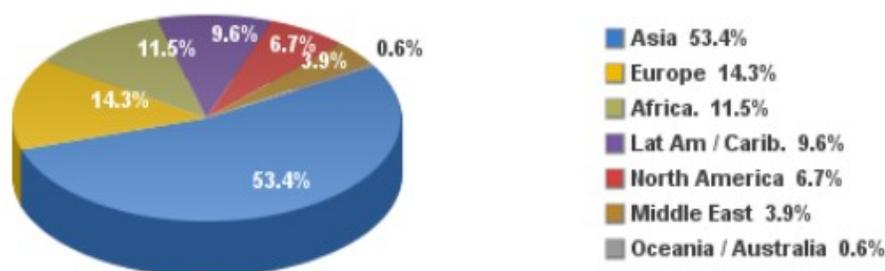
Table 2: World Internet Users and 2021 Population Stats

WORLD INTERNET USAGE AND POPULATION STATISTICS 2021 Year-Q1 Estimates						
World Regions	Population (2021 Est.)	Population % of World	Internet Users 31 Mar 2021	Penetration Rate (% Pop.)	Growth 2000-2021	Internet World %
Asia	4,327,333,821	54.9 %	2,762,187,516	63.8 %	2,316.5 %	53.4 %
Europe	835,817,920	10.6 %	736,995,638	88.2 %	601.3 %	14.3 %
Africa	1,373,486,514	17.4 %	594,008,009	43.2 %	13,058 %	11.5 %
Latin America / Carib.	659,743,522	8.4 %	498,437,116	75.6 %	2,658.5 %	9.6 %
North America	370,322,393	4.7 %	347,916,627	93.9 %	221.9 %	6.7 %
Middle East	265,587,661	3.4 %	198,850,130	74.9 %	5,953.6 %	3.9 %
Oceania / Australia	43,473,756	0.6 %	30,385,571	69.9 %	298.7 %	0.6 %
WORLD TOTAL	7,875,765,587	100.0 %	5,168,780,607	65.6 %	1,331.9 %	100.0 %

Source: <https://www.internetworldstats.com/stats.htm>

As a result, businesses and organisations can do research more quickly since they are linked to the internet. Consumers' habits and the development of video conferencing are monitored by companies that market their products on websites.

Fig. 2: Internet Users Distribution in the World - 2021

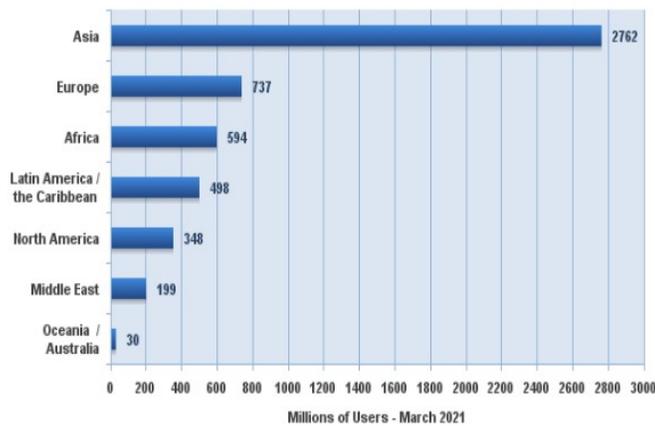


Source: Internet World Stats - www.internetworldstats.com/stats.htm

Basis: 5,168,780,607 Internet users in March 31, 2021

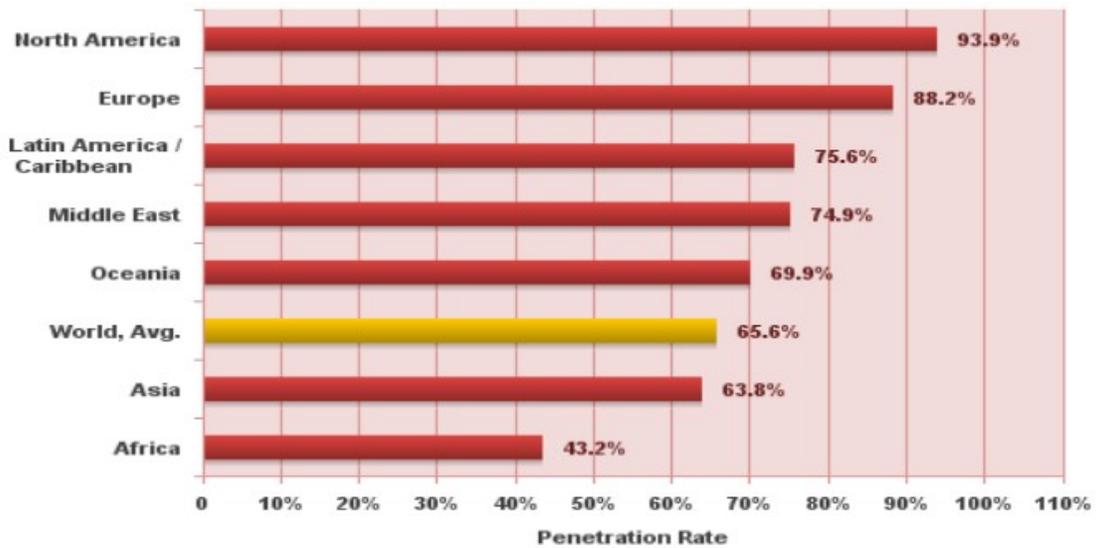
Copyright© 2021, Miniwatts Marketing Group

Fig. 3: Internet Users in the World by Geographic Regions - 2021



Source: Internet World Stats - www.internetworldstats.com/stats.htm
 Basis: 5,168,780,607 Internet users estimated In March 31, 2021
 Copyright © 2021, Miniwaits Marketing Group

Fig. 4: Internet World Penetration Rates by Geographic Regions - 2021



Source: Internet World Stats — www.internetworldstats.com/stats.htm
 Penetration Rates are based on a world population of 7,875,765,587
 and 5,168,780,607 estimated Internet users in March 31, 2021.
 Copyright © 2021, Miniwatts Marketing Group

CONCLUSION:

Information Technology is the essential demand of today’s world. Technological advancement is coming into all sectors. Education was a large and vital aspect of growth and progress. Information technology has transformed human existence profoundly, and not necessarily, all of the changes are favourable. Some may be unfavourable and have a deleterious influence on the person and the community. For example, traffickers utilise the Internet to market and advertise their items for sale. There are numerous ways of technology,

including what assists research, education and business. There is a strong link between science and technology. It is stated that the foundation of technology is to study science and use (IT) innovations in the diverse life's domains, in order to suit the demands of the people and the society. Therefore, it links the governments, industries and society to establish ways to better the living quality of the population. New business models are being created as a result of the beneficial changes brought about by information technology and the Internet, which serve as vital tools for facilitating human contact. When used strategically, the Internet allows businesses to advertise their products and services, as well as reach new consumers. Businesses who make use of this cutting-edge technology stand to gain a competitive edge via improved operational efficiency. The economy, society, and politics have all been affected by the rise of e-commerce. In today's more competitive business environment, companies are focusing on meeting the needs of their customers, which is the primary reason.

ACKNOWLEDGEMENT:

The authors wish to thank Supervisor and Co-Supervisor and all faculty members of Lincoln University.

REFERENCE:

Lindh, Cecilia & Dahlin, Peter. (2008). How Does Information Technology Impact on Business Relationships? The Need for Personal Meetings.

Shaqiri, A. B. (2015). Impact of Information Technology and Internet in Businesses. Academic Journal of Business, Administration, Law and Social Sciences, 1(1), 73–79.

Steenhuis, H. J., & De Bruijn, E. J. (2012). Technology and economic development: A literature review. International Journal of Innovation and Technology Management, 9(5). <https://doi.org/10.1142/S0219877012500332>

Berchane, N. (2018). MASTER INTELLIGENCE ECONOMIQUE ET STRATÉGIES COMPÉTITIVES. Retrieved from https://master-iesc-angers.com/impacts-of-information-technology-it/#_ftn3: https://master-iesc-angers.com/impacts-of-information-technology-it/#_ftn3

Berisha-Shaqiri, A. (2015). Impact of Information Technology and Internet in Businesses. IMPACT OF INFORMATION TECHNOLOGY AND INTERNET IN BUSINESSES, 1-8.

Berisha-Shaqiri, A. (2015). Impact of Information Technology and Internet in Businesses. https://www.researchgate.net/publication/287205733_Impact_of_Information_Technology_and_Internet_in_Businesses, 73-79.

Berisha-Shaqiri, A. (2015). Management Information System and Competitive Advantage. Mediterranean Journal of Social Sciences, 87-93.

C, G. (2018, 11 04). The History of Business & Information Technology. Retrieved from TVG Consulting: <https://www.tvgconsulting.com/the-history-of-business-technology/>

- Cisco. (2016). Internet of Things. United States: Cisco. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/se/internet-of-things/at-a-glance-c45-731471.pdf>
- Class, D. (2021, 06 10). Best Blogs & Insights From Digital Class E-Learning Marketplace. Retrieved from <https://www.digitalclassworld.com/blog/importance-of-information-technology/>: <https://www.digitalclassworld.com/blog/importance-of-information-technology/>
- Communication Technologies as Management Tools: Case of Slovenia, 636 (2004).
- Contributor, T. (2010, 06 09). WhatIs.com. Retrieved from <https://whatis.techtarget.com/definition/Analytical-Engine>: <https://whatis.techtarget.com/definition/Analytical-Engine>
- Dictionary, C. (2022, 01 12). Cambridge Dictionary. Retrieved from <https://dictionary.cambridge.org/dictionary/english/information-technology>.
- Duncan, S. (2021, 07 14). What is the role of information technology in business? Retrieved from Real Business: <https://realbusiness.co.uk/role-information-technology-business>
- EATOCK, J. P. (n.d.). A STUDY OF THE IMPACT OF INFORMATION. Brunel University, 30-40.
- Encyclopedia.com, I. T. (n.d.). Information Technology. Retrieved from encyclopedia.com: <https://www.encyclopedia.com/science-and-technology/computers-and-electrical-engineering/computers-and-computing/information-technology>
- Hofman, L. N. (2015). Impact of Information Technology. <https://d1wqtxts1xzle7.cloudfront.net/55182080/Ajbals-73-79-with-cover-page-v2.pdf?Expires=1642593715&Signature=dTIU3B2Glm6-mGI0WvwXX6PR1SwhnxWi2p-Y82rlzls4Wov2vAXMYIXy0VMHudRE5jXiDN77DeWRtcUCzPSKU1EeKnoQr4UbKw9s0QITTMZRFctaiUO3-eJyFY-rzWuTLbZGDB6z7cJCgkM,1-8>.
- Ibrahim, S. &. (2019). Impact of Information Communication Technology on Business Firms. International Journal of Science and Engineering Applications, 53-56.
- Iesc, A. (2018, 03 21). Impacts of information technology (IT). Retrieved from Master Intelligence Economique et Stratégies Compétitives: <https://master-iesc-angers.com/impacts-of-information-technology-it/>
- Iesc, A. (2018, 03 21). Master Intelligence Economique et Stratégies Compétitives. Retrieved from <https://master-iesc-angers.com/impacts-of-information-technology-it/>.
- Jetter, M. (2008). Technological Innovation and Its Impact on Business Model, Organization and Corporate Culture – IBM's Transformation into a Globally Integrated, Service-Oriented Enterprise. SpringerLink, 37–45.
- Lawlor, B. (2008). The Age of Globalization: Impact of. Bryant University, 1-51.

- Mgunda, M. I. (2019). The Impacts Information Technology On Business. Journal of International Conference Proceedings, 149-156. Retrieved from Journal of International Conference Proceedings.
- Miles, P. (2001). Globalization – Economic Growth and Development and Development Indicators. Retrieved from Planet Papers.
- Museum, C. H. (2022). Internet History of 1960s | Internet History | Computer History Museum. Retrieved from <https://www.scribbr.com/apa-citation-generator/new/webpage/>: <https://www.scribbr.com/apa-citation-generator/new/webpage/>
- Nikoloski, K. (2012). The Role of Information Technology in the. International Journal of Science and Research (IJSR), 303-309.
- Park, E. (1996, February). What a Difference the Difference Engine Made: From Charles Babbage's Calculator Emerged Today's Computer. Retrieved from <https://www.smithsonianmag.com/history/what-a-difference-the-difference-engine-made-from-charles-babbages-calculator-emerged-todays-computer-109389254/>: <https://www.smithsonianmag.com/history/what-a-difference-the-difference-engine-made-from-charles-babbages-calculator-emerged-todays-computer-109389254/>
- Press, G. (2013, 06 18). A Very Short History of Information Technology (IT). Retrieved from Forbes: <https://www.forbes.com/sites/gilpress/2013/04/08/a-very-short-history-of-information-technology-it/?sh=8fed4fd2440b>
- Sethi, V. &. (1994). Measures to Assess the Extent to Which an Information Technology Application Provides Competitive Advantage. https://econpapers.repec.org/article/inmormnsc/v_3a40_3ay_3a1994_3ai_3a12_3ap_3a1601-1627.htm, 601-1627.
- Shaqiri, A. (2015). Impact of Information Technology and Internet in Businesses. Academic Journal of Business, Administration, Law and Social Sciences , 73-79.
- TURING, A. (1936). COMPUTABLE NUMBERS. ON COMPUTABLE NUMBERS, WITH AN APPLICATION TO, 1-36.
- Wilburn, K. &. (2018). THE IMPACT OF TECHNOLOGY ON BUSINESS AND. Global Journal of Business Research, 23-39.
- M, Ilham & Eliyana, Anis & Agustina, Tri. (2021). A Systematic Literature Review : Information Technology Capital and Performance.