

Tool for Modified Macroeconomic Variables at the End of Pandemic

Md Swaid Sameh

Department of Management

Govt. Bangla College

University of Dhaka

Email: sameh.purno1998@gmail.com

And

Mir Jerine Farhath

Department of Management

Govt. Bangla College,

University of Dhaka

Email: mirjerine58@gmail.com

Submitted to the

International e-Conference on Microeconomic Impacts of COVID-19 Pandemic

October 2-3, 2021

Organized by

Center for Academic & Professional Career Development and Research (CAPCDR)

CAPCDR

Abstract

The COVID-19 pandemic has made our whole world economically weak. Because it has a direct impact on income. Surveys show that households, small businesses, industrial workers, and farmers are the worst affected in the world. They are including in microeconomics. Microeconomics is the part of economics concerned with single factors and their effects. They play an important role to build a country's economy strong. Though these parts inside the economy become weak the gross national income of the whole world has decreased. The suffering of the people increased day by day and the rate of unemployment has increased. They are not able to fulfill their basic right properly due to declining income. So how can they improve the economy of under the circumstance the country? This study will help us figure out how to overcome our economical losses.

Keywords: Economy, HRM, Covid, Globalization, Opportunity

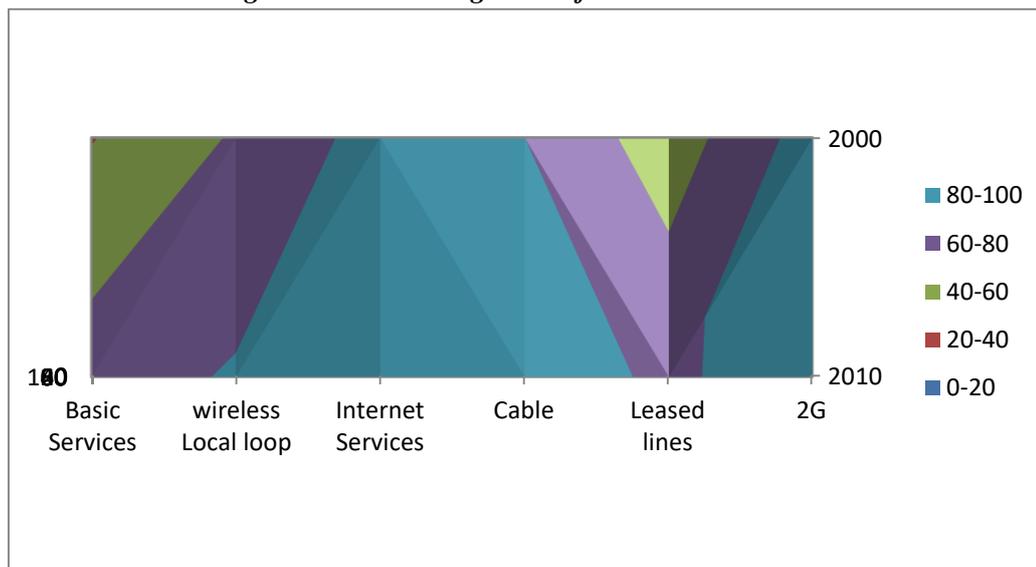
1.Introduction

This corona epidemic has caused huge damage to us in almost every sector in the world for almost 2 years also In 2020, FTSE falls by 14.3%.^[1] After all, the sector that can improve the most after the end of the epidemic is the ICT sector and the distinction between, in the 10 years after the end of the second world war and the per capita rate of growth after the global financial crisis, for example, is 27 percentage points, or almost \$17,000, beginning with US 2019, per capita GDP.^[2] In these two years, the epidemic has seen a massive decline in almost everything, which may take a few more years to recover & In 2019, almost 690 million people were undernourished, increasing from 2014 by about 60 million.^[3] In the wake of the Corona

epidemic in early 2020, the ICT sector has grown exponentially and has benefited greatly. Coupled with UN member states, it was discovered that by March 25, 2020, 57 percent (110) (COVID-19) had implemented some sort of information, with about 43 percent (83) giving no information. However, further analysis revealed that by April 8, 2020, approximately 86% (167) of its portals contained COVID-19 information and guidance.^[4] It is expected that, globally, the digital economy is valued at \$11.5 trillion, comparable to 15.5% of world GDP, and in the last 15 years has expanded two and a half times faster than world GDP.^[5] Some significant changes are already being noticed from now.^[6]

¹*Corresponding author, phone: +8801634336668, e-mail: sameh.purno1998@gmail.com

Figure1: Worldwide growth of certain ICT services



Source: ITU World Telecommunication/ICT Regulatory Database

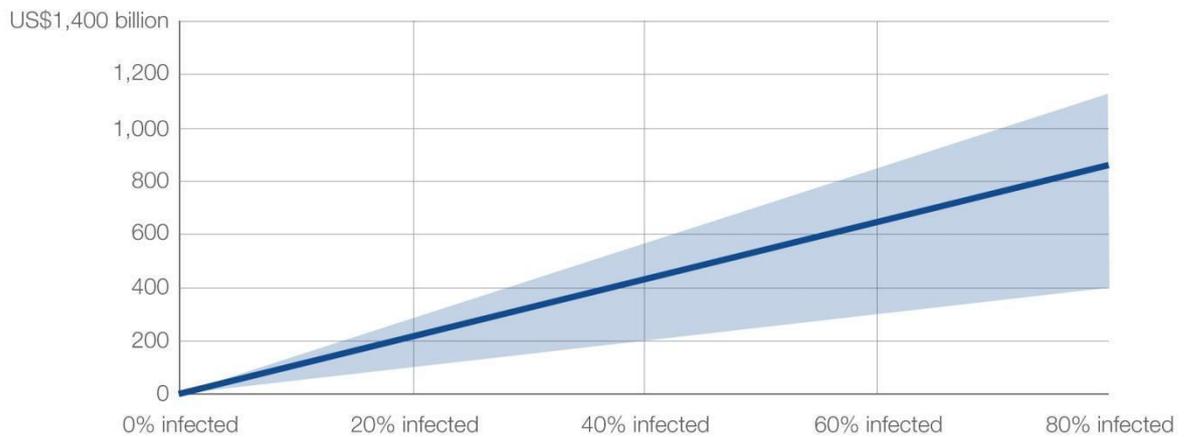
At present, the ICT sector has reached such a huge level that now all the features of macroeconomics can be noticed in it.^[7] When the Corona epidemic comes to an end or comes under control, only this sector will benefit.^[8] Developing countries focus and spend substantially on this industry. In a developing such as Bangladesh, Tk 1,721 crore, which is Tk 690 crore over last year, has been recommended for the ICT industry.^[9] Even the big modern countries of the world are considering this sector seriously.^[10] In Russia, A 10% increase in Internet coverage of excellent quality can lead to 1.4% GDP growth. In Russia, there have already been more mobile subscribers than fixed telephones, and the number of mobile internet users also has been fast increasing.^[11] The industry, according to the IT consultancy company IDC, is estimated to reach \$8.1 trillion by 2021, or 55 percent of China's GDP.^[12] The most recent ITU study Statistical Profiles of the Information Society 2009: America Region was submitted to the

conference. It offers an overview of the latest ICT developments, points out ICT and broadband in the USA, particularly fast mobile development. The research shows that over the previous five years, the number of mobile subscribers in the Americas has more than quadrupled, from slightly under 300 million in 2003 to over 750 million in 2008. The report also measures information and communication technologies inside and beyond the area.^[13] So we will discuss the economic situation after the corona epidemic in the significant sectors of this sector.

2.1. ICT in Health Care

Nowadays, the economic position in health care is so good that they need a lot of manpower even in this critical moment.^[14] The second quarter of net revenue of the UnitedHealth Group rose from 3.4 to 6.7 million dollars in the previous quarter, while net revenue of Anthem Inc. rose from 1.1 trillion dollars to 2.3 billion dollars.^[15]

Figure 2: Projected healthcare costs based on a proportion of the US population infected with COVID-19



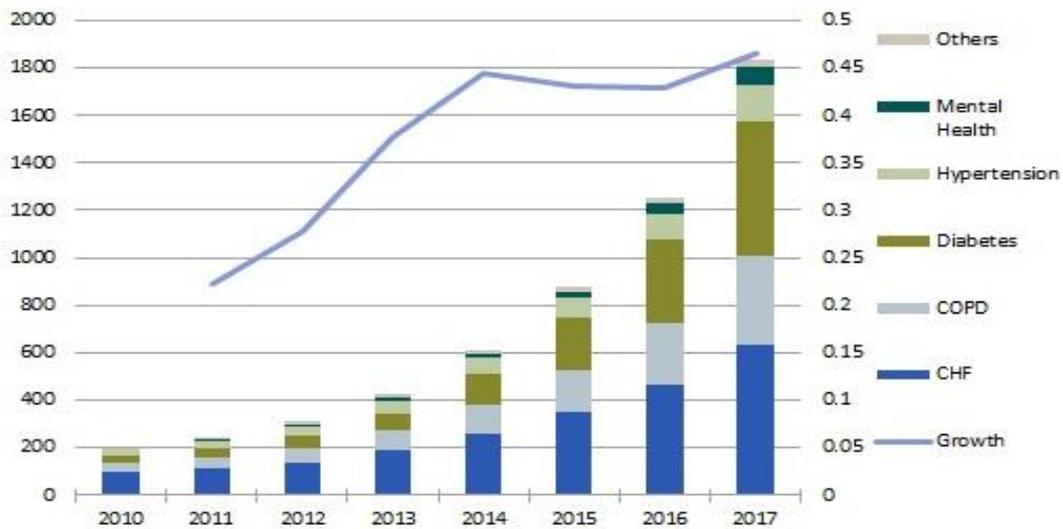
The lower bound represents a scenario in which key parameters seen in medical care today decline, specifically reductions in the probabilities of severe disease requiring hospitalization by 50%, ICU admission by 20%, and death by 95%. The upper bound represents a scenario in which key parameters rise, including increasing the probabilities of hospitalization and ICU admission by 20%.

Source; How will COVID-19 affect the financing of healthcare Provision across the US? PharmExec.^[16]

Although the pandemic has impacted the low-income countries most, their future is shining.^[17] The vaccine has now reached almost all countries.^[18] At the same time, there has been a touch of ICT in health care in almost all countries.^[19] This lowers patients' suffering and at the same time, many individuals receive readily their desired services within a very short period. Information technology enables hospital management to lead the company.^[20] Another important element of ICT in the health sector is telemedicine.^[21] By telemedicine or telepathy, only with the assistance of mobile phones may individuals consult or contact the doctor in their

homes. That's the start of a wonderful ICT age.^[22] Its role is growing at an alarming rate, especially in developing countries.^[23] 20% of the country's hospitals in rural areas in India have to manage to care for more than 60% of the people.^[24] Some estimates suggest that the EU telemedicine market has been growing from US\$3.1 billion in 2010 to US\$4.8 billion in 2011, almost tripling from CAGR 12.82 percent in 2019, reaching US\$14.4 billion worldwide in 2015, and is expected to grow to CAGR \$34.0 billion in 2020, with CAGR 18.6 percent. In 2020 CAGR's market share grew to almost \$34 billion.^[25]

Figure3: World telemedicine patients (in thousands)

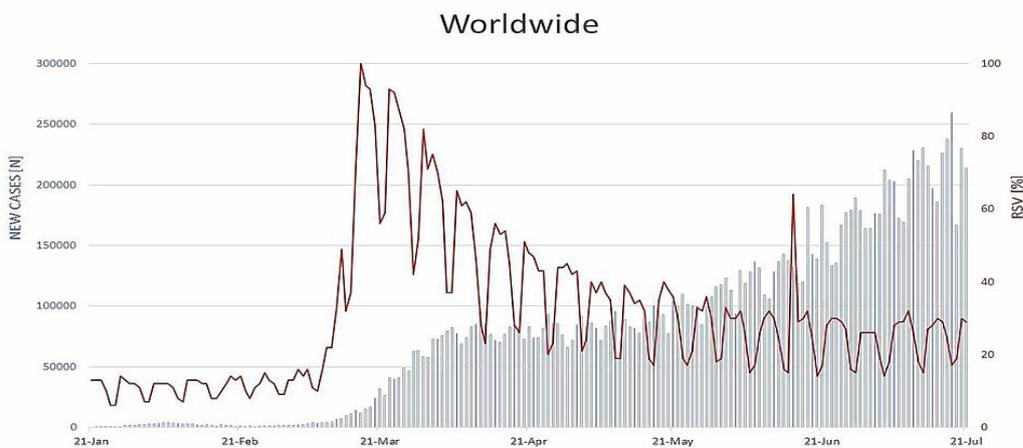


Source:

Telehealth in growth Mode worldwide. Healthcare IT News. (2013, January 22).^[26]

Our notion will be clearer if we notice some more efficiency. facts. We can also discover the facts regarding its

Figure4: RSV of worldwide public interest for telehealth reported on new COVID-19 cases daily



Source: Ali, S. A.,

Arif, T. B., Maab, H., Baloch, M., Manazir, S., Jawed, F., & Ochani, R. K. (2020, September 16). Global interest in telehealth During COVID-19 Pandemic: An analysis of google trends™.^[27]

This implies that it is becoming increasingly important both before and during the Corona outbreak.^[28] It has also had an incredible influence all across the globe.^[29] In 2050 there will be no "Telehealth." In 2025 there won't be any. It's just going to be 'health.' It's not going to be "virtual care," it's only "care."^[30]

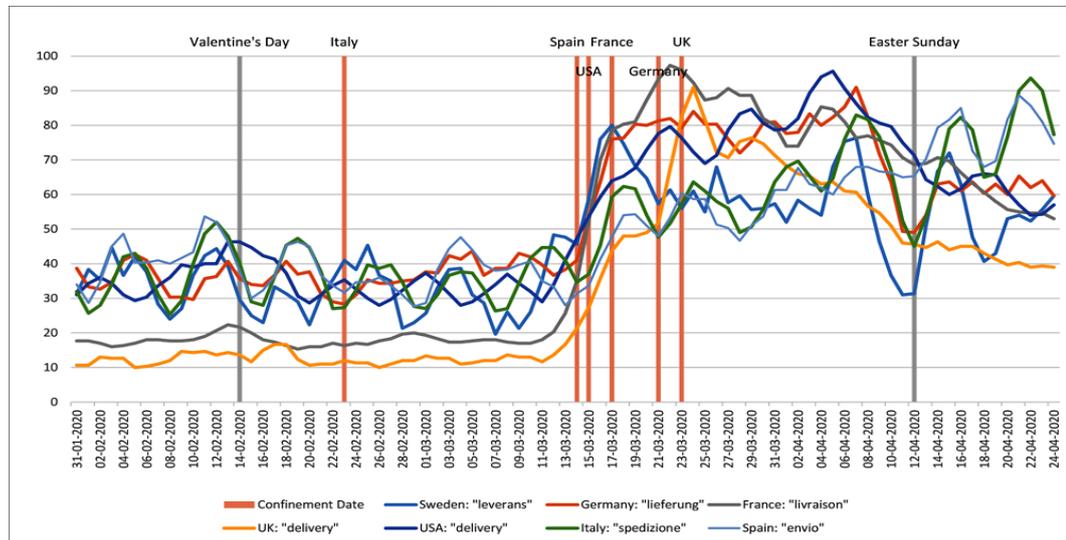
2.2. ICT in Entertainment

In the mid and aftermath of the Corona pandemic, ICT played an important role.^[31] ICT has affected entertainment and recreation by improving the various ways we spend our time informally.^[32] Entertainment is viewed as an elite culture, "elite culture has the authority of any cultural critic" (Stephen Bates and Anthony J. Ferri).^[33] Everyone

stayed at home since most people were frightened to go out because of the pandemic.^{[34][35]} This has been observed in many persons who desire emotional turmoil.^[36] Over 700 000 individuals died by suicide in 2019: one in 100 deaths.^[37] They thus

focus more on home entertainment through ICT to address this volatility.^[38] This made the industry a tremendous success.^[39] At the same time, internet platforms have been of great use.^[40]

Figure5: Selected OECD nations Google search interest in "delivery" (February to April 2020)



Source: E-commerce in the time of covid-19. OECD. (2020, October).^[41]

These are the world's best Alibaba, Netflix, Amazon, etc.^{[42][43]} Netflix has more than doubled its share of \$1.71,000,000 or \$3.75 a share a year ago. Revenues rose 24 percent to \$7.16 billion over the same period the previous year.^[44] This time last year, the revenue of Amazon increased to 108,5 billion dollars for the three months ending March, from 75 billion dollars (£54 billion). The profit amounted to 8.1 trillion dollars, up from 2,5 trillion a year before.^[45] Significant progress has also been made in e-commerce-related activities or organizations.^[46] The specialists thus predict that the disease will continue to advance after the pandemic.^{[47][48]}

3. ICT in every spare of life

ICT implies technology of information and communication,^[49] in the instruction and component that enable modern computers. It is used

for network-based monitoring and control of telecommunications, processing, and transmission systems of audiovisual products, smart building management systems, broadcast media, and so on...^[50] It also enables digital data administration such as computers, mobile robots, and so on. It's a huge system in one approach. We can't observe that after the corona epidemic the ICT growth has changed. ICT is currently covering all areas. Things like business, health, education, agriculture, robotics, biometrics, e-commerce, construction, clothing, entertainment, cars, etc.^[51]

3.1. E-commerce

E-commerce is a business concept that allows companies to buy and sell items via the internet.^[52] E-commerce operates in all four of the following major market segments:-

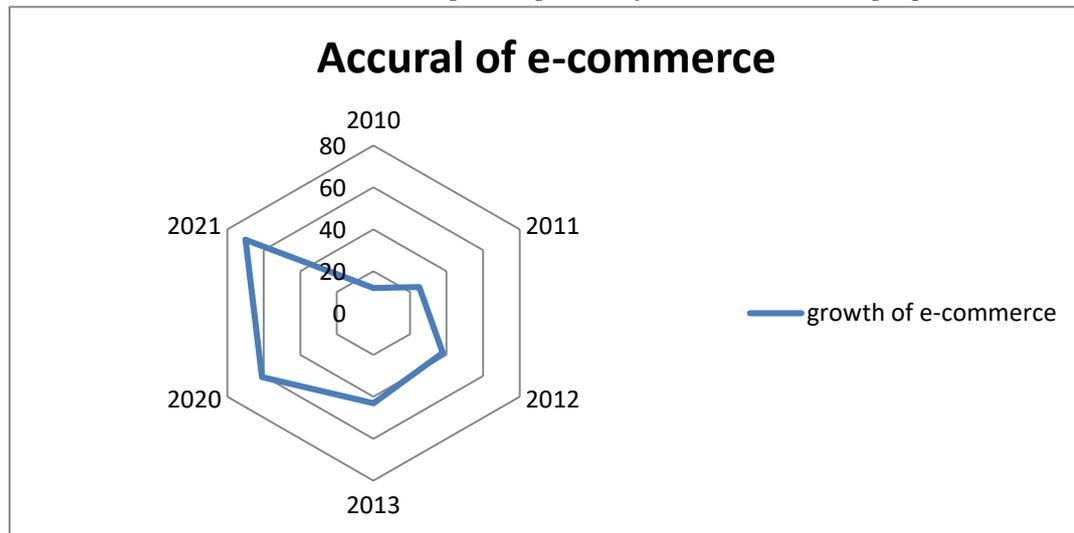
Business	Business	B2B
Business	Consumer	B2C

Source: Commerce market SHARE, growth & trends; TRENDS REPORT, 2020-2027. E. (n.d.).^[53]

E-commerce via the Internet when every consumer accesses an online shop for a product or service using their own devices and places order.^[54] Every seller goes online or live on Facebook or other social networks and shows their products. If the buyer likes the products they buy. After that

consumer gets their product at home through home service and they are also benefited, Freelancers to earn money by showing their work. All the sellers and freelancers are doing a good job and earn more money to upgrade their life during covid -19, It's possible because of ICT

Figure6: growth of e-commerce during a pandemic



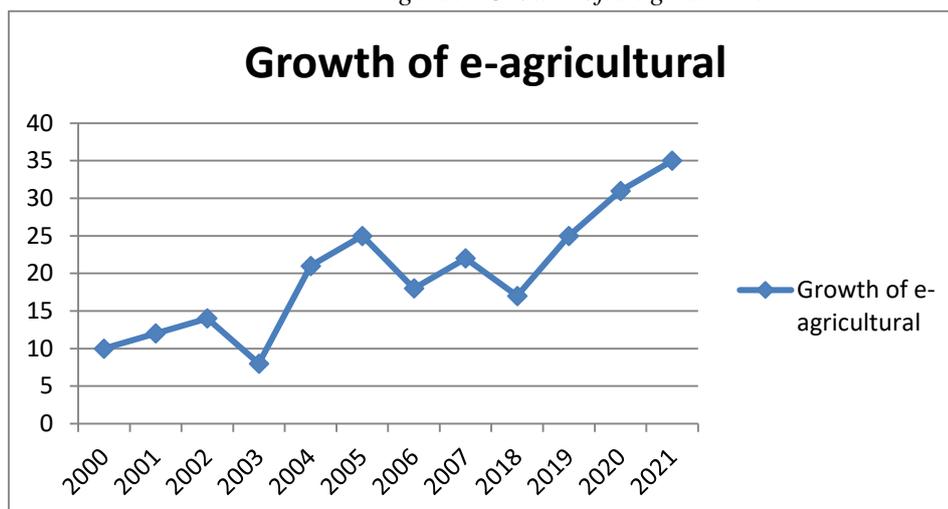
Source: Chevalier, S. (2021, July 7). Global retail e-commerce market size 2014-2023. Statista. ^[55]

3.2Agricultural

This part is very important for all of us. Agriculture is the life of the country. People consume food because of farmer and farming. Information and communication technology in agriculture also known as e-agriculture focuses on the enhancement of agricultural and rural development through improved information and communication process.^[56] More specifically e-agricultural involves the conceptualization, design, development, evaluation, and application of

innovative ways to use information and communication technologies in the rural domain with a primary focus on agriculture.^[57] Many e-agricultural interventions have been developed and tested around the world to help agriculturists improve their livelihoods through increased agricultural productivity and income or reducing risks.^[58]

Figure7: Growth of e-agricultural



Source: Solutions, E. I. U. D. (n.d.). *The Economist Intelligence Unit. Spotlight on agriculture.*^[59]

3.3 Education

Communication and Information Technology in education refers to the manner of education that uses information and communication technology to assist, enhance, and optimize educational delivery. Worldwide research has shown that ICT can lead to improved student learning and better teaching methods.^[60] An international study has demonstrated that ICT may increase student learning and teaching techniques.^[61] Within a relatively short period, information and communication have become one of the fundamental building elements of modern civilization.^[62] Many countries are beginning to recognize the importance of ICT and the fundamental skills and concepts that it entails as a part of the core of education.^[63] Several corona studies have been improved exclusively because of it. While at home, everyone can learn a lot via ICT and is extremely ICT expert. It will assist the country to It's become a human resource by keeping pace with the age of modern when they are competent in ICT.^[64] Many pupils would be affected if there were no ICT. You don't focus on your schoolwork. ICT learning has recently grown much easy.^[65] Students may fix their issues simply. They don't need to rely on instructors anymore.

4. Result

Gathering various types of data, it can be

observed that, although everything in this pandemic is worsening, only the ICT sector is faring considerably better than the rest. As a result, there is renewed optimism for the future.

5. Conclusion

So, after much deliberation and study, we concluded that ICT is more than simply a component; it plays a significant role. Its enormous importance cannot be comprehended with a single step or notion. We should thus explore this in further detail. Because in the future this industry will be macroeconomic.

Acknowledgment

All credit goes to our parents and our respected teacher Md Kamruzzaman, Assistant teacher, Haji Ashraf Ali High School, Dhaka, Bangladesh

References

1. Lora Jones, D. P. & D. B. (2021, January 24). *Coronavirus: How the pandemic has changed the world economy.* <https://www.bbc.com/news/business-51706225>.
2. Mischke, J., Woetzel, J., Smit, S., Manyika, J., Birshan, M., Windhagen, E., Schubert, J., Hieronimus, S., Dagorret, G., & Nogueir, M. C. (2021, June 23). *Will productivity*

- and growth return after the COVID-19 CRISIS?* McKinsey & Company. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/will-productivity-and-growth-return-after-the-covid-19-crisis>.
3. United Nations. (n.d.). *COVID-19: Embracing digital government during the pandemic and beyond | Department of economic and social affairs*. United Nations. <https://www.un.org/development/desa/dpad/publication/un-desa-policy-brief-61-covid-19-embracing-digital-government-during-the-pandemic-and-beyond/>.
 4. United Nations. (n.d.). *COVID-19: Embracing digital government during the pandemic and beyond | Department of economic and social affairs*. United Nations. <https://www.un.org/development/desa/dpad/publication/un-desa-policy-brief-61-covid-19-embracing-digital-government-during-the-pandemic-and-beyond/>.
 5. Henry-Nickie, M., Frimpong, K., & Sun, H. (2019, March 29). *Trends in the information technology sector*. Brookings. <https://www.brookings.edu/research/trends-in-the-information-technology-sector/#footnote-2>.
 6. *Ict of the future*. FFG. (n.d.). <https://www.ffg.at/en/node/9271>.
 7. (PDF) *can TECHNOLOGY-BASED services support long-term care ...* (n.d.). https://www.researchgate.net/publication/249315045_Can_technology-based_services_support_long-term_care_challenges_in_home_care.
 8. Zaman, A., Islam, M. N., Zaki, T., & Hossain, M. S. (2020, April 21). *Ict intervention in the containment of the pandemic spread of covid-19: An exploratory study*. arXiv.org. <https://arxiv.org/abs/2004.09888>.
 9. Kabir, R. (2021, June 27). *Time to welcome new strategy in ict sector*. The Daily Star. <https://www.thedailystar.net/business/new-s/time-welcome-new-strategy-ict-sector-2119317>.
 10. *Information and communication Technology (ICT) sector ...* (n.d.). http://www.urenio.org/e-innovation/stratinc/files/library/ict/55.ICT_EE-USA.pdf.
 11. *Telecommunications*. Ministry of Digital Development, Communications and Mass Media of the Russian Federation. (n.d.). <https://digital.gov.ru/en/activity/statistic/rating/telekommunikacii/>.
 12. *China - technology AND Ictchina - technology and ICT*. China - Technology and ICT | Privacy Shield. (n.d.). <https://www.privacyshield.gov/article?id=China-Technology-and-ICT>.
 13. Americas region defines its ict development priorities. (n.d.). <https://www.itu.int/net/itunews/issues/2009/08/30.aspx>.
 14. Written by Leigh Jansen, A. P. (n.d.). *Industry innovation: How has COVID-19 changed GLOBAL healthcare?* World Economic Forum. <https://www.weforum.org/agenda/2020/11/healthcare-innovation-covid-coronavirus-pandemic-response-health>.
 15. Caroline F. Plott, M. S. (2020, November 3). *Unexpected health insurance profits and the Covid-19 Crisis*. JAMA. <https://jamanetwork.com/journals/jama/fullarticle/2772481>.
 16. *How will COVID-19 affect the financing of healthcare Provision across the US?* PharmExec. (n.d.). <https://www.pharmexec.com/view/how-will-covid-19-affect-financing-healthcare-provision-across-us>.
 17. World Health Organization. (n.d.). *COVID-19 significantly impacts health services For noncommunicable diseases*. World Health Organization. <https://www.who.int/news/item/01-06-2020-covid-19-significantly-impacts-health-services-for-noncommunicable-diseases>.

18. *Almost 3 million vaccines against COVID-19 have already REACHED 24 countries in the region.* UNICEF Latin America and Caribbean. (n.d.). <https://www.unicef.org/lac/en/almost-3-million-vaccines-against-COVID-19-have-already-reached-24-countries-in-the-region>.
19. Gallagher, E. B. (1988). Modernization and medical care. *Sociological Perspectives*, 31(1), 59–87. <https://doi.org/10.2307/1388951>
20. *Information communication technology in HealthCare: Uses of ICT.* Frontenders Blog. (2018, August 30). <https://www.frontenders.in/blog/information-communication-technology-healthcare.html>.
21. Khan, N. N. (2021, February 13). *Digital transformation in the health SECTOR: Making healthcare more inclusive and accessible.* The Daily Star. <https://www.thedailystar.net/supplements/30th-anniversary-supplements/going-digital/news/digital-transformation-the-health-sector-making-healthcare-more-inclusive-and-accessible>.
22. *Test your knowledge on telemedicine.* Medindia. (n.d.). <https://www.medindia.net/medical-quiz/test-your-knowledge-on-telemedicine.asp>.
23. World Health Organization. (n.d.). *Telemedicine: Opportunities and developments in member state.* World Health Organization. <https://www.afro.who.int/publications/telemedicine-opportunities-and-developments-member-state>.
24. *Telemedicine in developing countries.* BORGEM. (2020, May 15). <https://www.borgenmagazine.com/telemedicine-in-developing-countries/>.
25. Combi, C., Pozzani, G., & Pozzi, G. (2016, November 2). *Telemedicine for developing Countries. a survey and some design issues.* Applied clinical informatics. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5228142/>.
26. *Telehealth in growth Mode worldwide.* Healthcare IT News. (2013, January 22). <https://www.healthcareitnews.com/news/telehealth-growth-mode-worldwide>.
27. Ali, S. A., Arif, T. B., Maab, H., Baloch, M., Manazir, S., Jawed, F., & Ochani, R. K. (2020, September 16). *Global interest in telehealth During COVID-19 Pandemic: An analysis of google trends™.* Cureus. <https://www.cureus.com/articles/41280-global-interest-in-telehealth-during-covid-19-pandemic-an-analysis-of-google-trends>.
28. *The COVID Decade: Understanding the long-term societal impacts of covid-19.* The British Academy. (n.d.). <https://www.thebritishacademy.ac.uk/publications/covid-decade-understanding-the-long-term-societal-impacts-of-covid-19/>.
29. *Predicting the future role of telemedicine.* Modern Healthcare. (2020, October 27). <https://www.modernhealthcare.com/technology/predicting-future-role-telemedicine>.
30. *Telehealth 2050: The future design of virtual care technology.* Healthcare IT News. (2021, May 10). <https://www.healthcareitnews.com/news/telehealth-2050-future-design-virtual-care-technology>.
31. Entertainment and leisure. ICT. (n.d.). https://ictapplications.fandom.com/wiki/Entertainment_and_leisure.
32. (Joebest), U. J. O. (2021, January 20). Application of ict in entertainment. APPLICATION OF ICT IN ENTERTAINMENT. <https://academicpower.blogspot.com/2017/08/application-of-ict-in-entertainment.html>.
33. Nosmik, K. (n.d.). Impact of ict in education, entertainment, development, governance, politics and industry. Academia.edu. https://www.academia.edu/5066850/IMPACT_OF ICT_IN_EDUCATION_ENTER

- TAINMENT_DEVELOPMENT_GOVERNANCE_POLITICS_AND_INDUSTRY.
34. Studying at home due to COVID-19? This is how young people in Georgia are coping with the situation. UNICEF Georgia. (2020, March 24). <https://www.unicef.org/georgia/stories/studying-home-due-covid-19-how-young-people-georgia-are-coping-situation>.
 35. Take care of yourself in the time of COVID-19 outbreak. UNICEF Serbia. (n.d.). <https://www.unicef.org/serbia/en/take-care-yourself-time-covid-19-outbreak>.
 36. Rackham, A. (2021, May 17). Covid: How to deal with social anxiety as RESTRICTIONS EASE. BBC News. <https://www.bbc.com/news/newsbeat-56323453>.
 37. World Health Organization. (n.d.). One in 100 deaths is by suicide. World Health Organization. <https://www.who.int/news/item/17-06-2021-one-in-100-deaths-is-by-suicide>.
 38. Castagna, R., & Bigelow, S. J. (2021, August 5). What is information technology? Definition and examples. SearchDataCenter. <https://searchdatacenter.techtarget.com/definition/IT>.
 39. Saleh, Y. (2020, September 10). ICT, social media and COVID-19: Evidence from INFORMAL home-based business community in Kuwait City. Journal of Enterprising Communities: People and Places in the Global Economy. <https://www.emerald.com/insight/content/doi/10.1108/JEC-07-2020-0131/full/html?skipTracking=true>.
 40. Zaryn Dentzel Tuenti, Dentzel, Z., & Tuenti. (n.d.). How the internet has changed everyday life. OpenMind. <https://www.bbvaopenmind.com/en/articles/internet-changed-everyday-life/>.
 41. E-commerce in the time of covid-19. OECD. (2020, October 7). <https://www.oecd.org/coronavirus/policy-responses/e-commerce-in-the-time-of-covid-19-3a2b78e8/>.
 42. The world's top online Marketplaces 2021. Web Retailer. (2021, August 30). <https://www.webretailer.com/b/online-marketplaces/>.
 43. Top e-commerce and shopping websites ranking by traffic in July 2021. Similarweb. (n.d.). <https://www.similarweb.com/top-websites/category/e-commerce-and-shopping/>.
 44. Liedtke, M. (2021, April 21). Netflix's subscriber growth, stock zapped as pandemic eases. AP NEWS. <https://apnews.com/article/health-business-coronavirus-arts-and-entertainment-e8d3f7bcc7f11f4ff726a016e97cb5af>.
 45. BBC. (2021, April 29). Amazon hopes PANDEMIC habits stick after PROFITS TRIPLE. BBC News. <https://www.bbc.com/news/business-56937428>.
 46. How COVID-19 triggered the digital and e-commerce turning point. UNCTAD. (2021, March 15). <https://unctad.org/news/how-covid-19-triggered-digital-and-e-commerce-turning-point>.
 47. Global ict spending - forecast 2020 – 2023. IDC. (n.d.). <https://www.idc.com/promo/global-ict-spending/forecast>.
 48. COVID-19 and E-commerce: A GLOBAL review. UNCTAD. (n.d.). <https://unctad.org/webflyer/covid-19-and-e-commerce-global-review>.
 49. Pratt, M. K. (2019, July 26). What is ICT (information and COMMUNICATIONS Technology)? SearchCIO. <https://searchcio.techtarget.com/definition/ICT-information-and-communications-technology-or-technologies>.
 50. Techopedia. (2020, August 18). What is information and communications Technology (ict)? - definition from Techopedia. Techopedia.com. <https://www.techopedia.com/definition/24>

- 152/information-and-communications-technology-ict.
51. Making sense of iot (internet of things) - the iot business guide. i. (2021, September 4). <https://www.i-scoop.eu/internet-of-things-iot/>.
52. Bloomenthal, A. (2021, July 28). Electronic commerce (E-COMMERCE). Investopedia. <https://www.investopedia.com/terms/e/ecommerce.asp>.
53. Commerce market SHARE, growth & TRENDS REPORT, 2020-2027. E. (n.d.). <https://www.grandviewresearch.com/industry-analysis/e-commerce-market>.
54. Chai, W., Holak, B., & Cole, B. (2020, December 15). What is e-commerce? Definition and meaning. SearchCIO. <https://searchcio.techtarget.com/definition/e-commerce>.
55. Chevalier, S. (2021, July 7). Global retail e-commerce market size 2014-2023. Statista. <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>.
56. Okoronkwo Madubuezi C. and IROEGBU CHIBUISI. (n.d.). 1.0 introduction. THE APPLICATION OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) IN AGRICULTURE. <https://www.ijser.org/paper/THE-APPLICATION-OF-INFORMATION-AND-COMMUNICATIONS-TECHNOLOGY-ICT.html>.
57. (PDF) role of information and communication technologies in Indian AGRICULTURE: An overview. ResearchGate. (n.d.). https://www.researchgate.net/publication/273242368_Role_of_Information_and_Communication_Technologies_in_Indian_Agriculture_An_Overview.
58. Wikimedia Foundation. (2021, April 3). Information and communications technology in agriculture. Wikipedia. https://en.wikipedia.org/wiki/Information_and_communications_technology_in_agriculture.
59. Solutions, E. I. U. D. (n.d.). The Economist Intelligence Unit. Spotlight on agriculture. <http://country.eiu.com/article.aspx?articleid=778054661&Country=Peru&topic=Economy>.
60. Information and communication technology (ict) in education. Information and communication technology (ICT) in education | Unesco IIEP Learning Portal. (n.d.). <https://learningportal.iiep.unesco.org/en/issue-briefs/improve-learning/information-and-communication-technology-ict-in-education>.
61. Convergence of ICT and education - UNAPCICT.ORG. (n.d.). https://www.unapcict.org/sites/default/files/2019-01/Convergence_ICT_Education.PDF.
62. Educational informatics: An era in education. IEEE Xplore. (n.d.). <https://ieeexplore.ieee.org/document/6208613>.
63. Information and communication technology for education - adb. (n.d.). <https://www.adb.org/sites/default/files/publication/385526/ict-education-sa.pdf>.
64. Strengthening online learning when schools are closed: The role of families and teachers in supporting students during the COVID-19 Crisis. OECD. (2020, September 24). <https://www.oecd.org/coronavirus/policy-responses/strengthening-online-learning-when-schools-are-closed-the-role-of-families-and-teachers-in-supporting-students-during-the-covid-19-crisis-c4ecba6c/>.
65. The effect Of ICTS on academic achievement: The Conectar ... (n.d.). https://repositorio.cepal.org/bitstream/handle/11362/40784/RV1119_Formichella.pdf?sequence=1&isAllowed=y.