COVID 19 in the ECO Region: Impact, Status of Health Care and ICT Infrastructure, and Response by the Member States

Khalil Raza Economic Cooperation Organization Science Foundation, Islamabad, Pakistan k.raza@ecosf.org

1. COVID-19 in the ECO region

With current outbreak of the COVID-19, the pandemic has now spread in nearly all regions of the world. As this crisis unfolds, it highlights the importance of healthcare facilities and preparedness to respond to this crisis. Although, no country has been fully prepared for the pandemics of this scale; this virus does not know any borders, all countries must prioritize and exercise the capabilities required to prevent, detect, and rapidly respond to public health emergencies.

The COVID-19 has exposed the fragile limits of healthcare facilities and infrastructures around the world. Even in the countries with best healthcare system, their overall preparedness seems to be weak in handling this situation. However, situation is even worse when it comes to the developing world. Many developing countries lack the health capacities and capabilities that are needed to detect, and respond to significant infectious disease outbreaks.

It is even more challenging when we think of resource-limited regions with poor sanitation and weak health systems, which is actually the case in some of the ECO Member Countries. The COVID-19 outbreak is creating significant additional pressure on an already overburdened health system in the Member Countries. This brief is an attempt to assess the status of healthcare and ICT infrastructure in the ECO Member Countries and how these countries have responded during the outbreak of this this pandemic. Almost all ECO Countries are under the state of emergency; where schools, universities, workspace, cinemas, and sports venues are currently closed and air travel remains suspended¹⁾.

Iran was one of the world's early COVID-19 hotspots and the first country amongst ECO Member Countries to have reported the cases of COVID-19

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(Figure 1). Since then the virus has spread rapidly in the country. Soon Iran was declared one of the world's coronavirus epicenters after China, with the death toll surpassing 5,900 and the number of cases topping 93,000. Iran faces serious challenges to respond to the pandemic, amidst the sanctions against global trade, cutting into its crude oil sales, banking and other industries. The coronavirus, coming on top of the economic struggles of the sanctions, is increasingly hitting Iran's already struggling economy.

Presently, Turkey has exceeded Iran and has highest number of confirmed cases of COVID-19²⁾ (Figure 1). As of May, 2020, the official number of cases in Turkey stands at 117,589, the seventh highest total in the world³⁾. However, despite highest rate of infection, Turkey has managed to keep its death rate quite low⁴⁾. The low death rate can be attributed to the Turkey's well developed healthcare system, and aggressive testing capacity along with emphasis on early diagnosis.

Despite the lower confirmed cases than Turkey, Iran has the highest number of confirmed deaths in the ECO region and that is almost double that of Turkey (Figure 2). Meanwhile, Turkish health authorities have signaled that the country is at the peak point of outbreak, as the daily deaths are appearing to slow down³⁾. Besides, the recent numbers indicate that Turkey has brought the outbreak under control. The following charts 1 and 2 present the confirmed number of cases and deaths in the ECO Member Countries as of April 30, 2020. Good news is that Tajikistan and Turkmenistan have not reported any case, so far.

Compared to its high population density in the ECO region, Pakistan has lower cases of COVID-19. As of April 30, the total number of positive

and confirmed deaths stood at 15,500 and 340 respectively. Many argue that actual numbers may be significantly high but due to low rate of testing, the positive cases go undetected and hence the low rate of infections in the country⁵⁾. Despite fiscal constraints and struggling economy, the Pakistani government has rolled out a massive social safety net initiative, termed as Ehsaas Emergency Cash Programme⁶⁾. This is intended for many of the country's poorer residents involving direct cash transfers during the lockdown in the country. The economic implications of COVID-19 will be particularly severe in Pakistan. Prior to COVID-19, the country has been observing economic austerity after a balance of payments crisis resulting in loans from the IMF. Whereas, the Ministry of Planning, Development and Reforms has estimated that unemployment in the country could spike, leaving

3) Ahval. (2020, April 29). Health minister says Turkey at peak point of outbreak, as COVID-19 death toll rises to 3,081 – live blog. Ahval. https://ahvalnews.com/turkey-coronavirus/health-minister-saysturkey-peak-point-outbreak-covid-19-death-toll-rises-3081

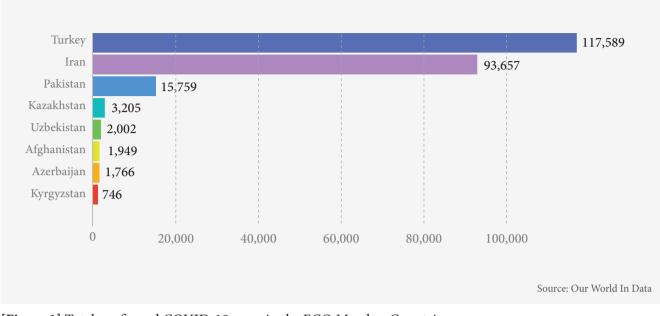
4) TRTWorld. (2020, April 23). Why is the coronavirus fatality rate low in Turkey? TRT World. https://www.trtworld.com/turkey/why-is-thecoronavirus-fatality-rate-low-in-turkey-35688

5) Agrawal, R. (2020, April 30). A Coronavirus Mystery: Why Are There So Few Cases in South Asia? Foreign Policy. https://foreignpolicy. com/2020/04/30/coronavirus-mystery-why-so-few-cases-south-asiaindia-pandemic-lockdown/

6) Mukhtar, I. (2020, April 29). Ready to open offices for Ehsaas programme verification: NADRA. The Nation. https://nation.com. pk/29-Apr-2020/ready-to-open-offices-for-ehsaas-programmeverification-nadra

RFE/RL. (2020, April 26). Covid-19: Iran's Rohani Says New Tracking System Could Lead To Mosque Reopenings; Pakistan Extends Suspension Of International Flights. Radio Free Europe Radio Liberty. https://www.rferl.org/a/covid-19-pakistan-extends-suspension-ofinternational-flights-tajikistan-

²⁾ McKernan, B. (2020, April 7). Turkey's Covid-19 infection rate rising fastest in the world. The Guardian. https://www.theguardian.com/ world/2020/apr/07/turkeys-covid-19-infection-rate-rising-fastest-inthe-world?fbclid=IwAR2PvsR6oFv81d5h6G8Zgjt7AvarNLaIXL0ZCLy Lh1QE30r2hjM7yGOLC48



[Figure 1] Total confirmed COVID-19 cases in the ECO Member Countries

The number of confirmed cases is lower than the number of total cases. The main reason for this is limited testing.

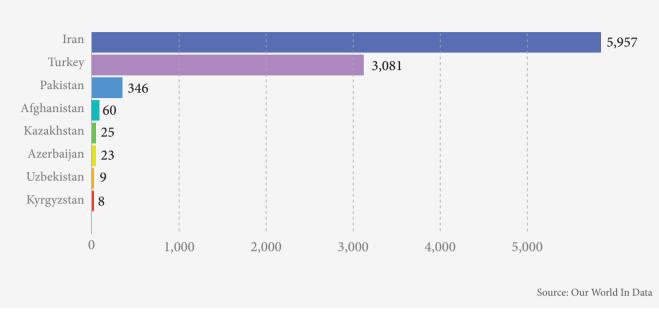
as many as 18.5 million people jobless⁷⁾. Pakistan has developed a dashboard to monitor COVID-19; accessible at http://covid.gov.pk

The ECOSF has also developed a dashboard with real-time statistics on COVID-19 numbers for the ECO Member countries, accessible at http://ecosf. org/covid.aspx.

Afghanistan faces a real challenge in handling this pandemic situation. Currently, the confirmed cases stand at 1949 in the country. With limited healthcare capacity and a population that is more than 70 percent based in rural areas, it will be challenging for the country if the virus continues to spread widely in far-flung areas⁸⁾. The country has already been through wars for decades and now they are bracing for another challenge which could threaten the nation⁹⁾. Likewise in Azerbaijan, as the number of infections began to increase, strict measures have been taken¹⁰⁾. All land borders with the neighbors have closed and education and work related activities have been suspended.

Kazakhstan has taken COVID-19 seriously and so far, it has conducted the highest tests per capita amongst the ECO Member Countries. The country has taken reasonable measures, including closing nonessential business, curtailing travel, and enforcing quarantines.

Kazakhstan also has developed its dashboard with the latest data accessible at https://www. coronavirus2020.kz. Economic implications of COVID-19 will be stern for Kazakhstan as well. Due to low demand of oil, Kazakhstan could see a sharp decline in its revenue generation.



[Figure 2] Total confirmed COVID-19 deaths in the ECO Member Countries

Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.

Similarly, with the outbreak, Uzbekistan took immediate actions after its first case was reported. Uzbekistan is under a state of emergency; it has closed its borders, worksp aces and schools, while heavy restrictions have been placed on movement within cities. At the same time, Uzbekistan has allowed freight traffic to continue across the region to enable the flow of aid and supplies to transit through its territory.

Kyrgyz authorities also appear to be taking the pandemic seriously. The authorities set up a website with information on the virus and news updates; accessible at https://covid.kg. The economic implications of this pandemic will be severe for the Kyrgyz Republic, as its economy relies heavily on remittances, 33% of GDP in 2018¹¹⁾. Thus, the country is expected to get a serious hit on remittances

sparked by the pandemic. See supplementary data 1 for more information about government response to COVID-19 of the ECO Member Countries.

⁷⁾ Rana, S. (2020, April 3). Coronavirus forecast to render 18.5m jobless in Pakistan. The Express Tribune. https://tribune.com.pk/ story/2189904/2-coronavirus-forecast-render-18-5m-jobless/

⁸⁾ Rahim, S. A. (2020, April 11). What the COVID-19 Outbreak Means for Afghanistan's Troubled Economy. The Diplomat. https:// thediplomat.com/2020/04/what-the-covid-19-outbreak-means-forafghanistans-troubled-economy/

Ahelbarra, H. (2020, April 15). Afghans brace for COVID-19 outbreak. Asia | Al Jazeera. https://www.aljazeera.com/news/2020/04/afghansbrace-covid-19-outbreak-200415055726150.html

¹⁰⁾ Baghirov, O. (2020, April 25). Azerbaijan's response to COVID-19 related economic problems. Modern Diplomacy. https:// moderndiplomacy.eu/2020/04/23/azerbaijans-response-to-covid-19related-economic-problems/

¹¹⁾ OSMONALIEVA, B. (2020, May 1). UNDP assesses Kyrgyzstan's preparedness to respond to COVID-19. 24.kg. https://24.kg/ english/151604_UNDP_assesses_Kyrgyzstans_preparedness_to_ respond_to_COVID -19/



[Figure 3] Number of ICU beds per 100k -Turkey has the highest number of ICU beds compared to major developed countries

2. Healthcare infrastructure in the ECO region

As the world struggles to respond to the COVID-19 pandemic, the virus is already pushing hospital and healthcare capacities to critical point. The deteriorating situation exposes lack of critical care infrastructure across different countries, particularly in terms of ICU bed capacity, ventilators and personal protective equipment (PPEs) for the healthcare workers (Figure 3). In addition, the institutional and systematic health inequalities continue to persist in developing countries, and the ECO Member Countries are no different (Figure 7).

With this pandemic, there is a growing recognition that national health security is fundamentally weak in many a developing world¹²⁾. Thus, no country is fully prepared for epidemics or pandemics, and every country has important gaps to address. Under the

current scenario, ECO Member countries require flexible and timely measures with adequate financing options to detect and prevent the spread of this virus. It is a high time that all ECO Member Countries must prioritize and exercise the capabilities required to prevent, detect, and rapidly respond to this pandemic.

This brief assesses the healthcare capabilities by each ECO Member State against the Global Health Security Index (GHSI)¹³⁾. The GHSI is a comprehensive assessment and benchmarking of health security and related capabilities across the 195 countries to address one of the world's most omnipresent risks: infectious disease outbreaks that can lead to international epidemics and pandemics. A snapshot of ECO Member profiles is provided at the end of this report.

The Global Health Security Index or GHSI underscores that every country must be transparent about its capabilities to assure neighbors it can stop an



outbreak from becoming an international catastrophe. The Global Health Security Index measures the capabilities of participating countries using six prime parameters, as listed below: as shown in Figure 4. See supplementary data 2 for more information about GHS Index profiles of the ECO Member Countries.

According to the GHS Index, Turkey appears to be better prepared with adequate healthcare infrastructure to respond to this crisis amongst the ECO Member Countries. Perhaps it is because of this reason that Turkey has been able to steadily ramp up its testing capacity to accurately map out the COIVD-19 outbreak and stop further infections. In addition, Turkey has been among a few countries in the world that carried out more than a million coronavirus tests¹⁴⁾.

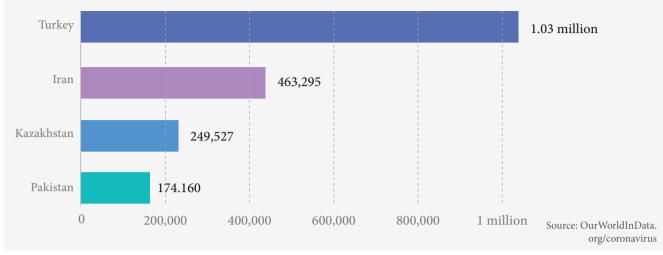
Furthermore, the COVID-19 crisis has also sparked a situation to reconsider the existing

budget allocations across sectors and within the health sector in particular. The pandemic is forcing countries to reprogram existing expenditures towards the health care response. Therefore, we look at the Current Healthcare expenditure by the ECO Member Countries. We also look at the availability of physicians and hospital beds per 1000 people in each

¹²⁾ KFF. (2020, February 13). Global Health Security Index Highlights Countries Best Prepared For Health Emergencies. KFF Daily Global Health Policy Report. https://www.kff.org/news-summary/globalhealth-security-index-highlights-countries-best-prepared-for-healthemergencies-finds-national-health-security-fundamentally-weakaround-world/15) https://www.ghsindex.org

¹³⁾ NTI. (2020, April 10). The Global Health Security Index. GHS Index. https://www.ghsindex.org/

¹⁴⁾ Daily Sabah. (2020, April 30). Turkey completes over 1 million COVID-19 tests; number of patients in critical care declines. Daily Sabah. https://www.dailysabah.com/turkey/turkey-completes-over-1-millioncovid-19-tests-number-of-patients-in-critical-care-declines/news



[Figure 5] Total COVID-19 tests conducted in selected ECO Member Countries (As of April 30, 2020)

Note: For testing figures, there are substantial differences erences across countries in terms of the units, whether or not all labs are included, the extent to which negative and pending tests are included and other aspects. Details of each country can be found at Our World in Data website.

Member State to assess the healthcare capabilities in the Member States.

In terms of healthcare expenditure per capita, the average value for the entire ECO region stands at US\$ 227 which is much less than the global average at US\$ 884 as shown in Figure 6B. Although Iran, Turkmenistan, and Turkey show better capita spending and each one of these country spend twice than the ECO average.

However, it is disappointing to see that Pakistan, Afghanistan and Tajikistan are acutely poor in terms of per capita healthcare spending in the region. Their per capita spending is less than the WHO's benchmark for the low income countries. Although, in terms of healthcare spending as percentage of GDP, the ECO region has a slightly higher standing than world average at 6.4% than the global average at 6.3% as show in the Figure 6A.

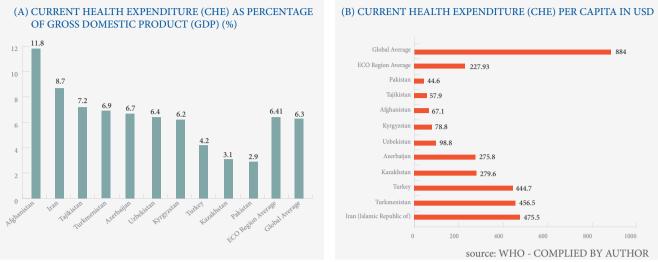
The Figure 6 demonstrates also demonstrates that some ECO Member countries will face sever

challenges owing to their week national healthcare infrastructure. If the current outbreak continues to spread further, it may highlight persistent health system constraints in addition to lack of adequately skilled health workforce in these Member States.

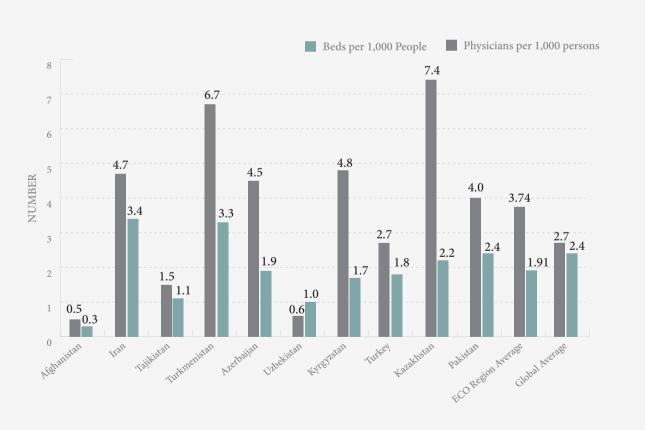
The Figure 7 demonstrates the availability of hospital beds and physicians per 1,000 people in the ECO Member Countries. Pakistan and Afghanistan rank lowest in the region with values less than combined average of ECO and the global average. It could mean that with fast- moving spread of the COVID-19, Pakistan would most likely be on its way to quickly reach its critical limits of healthcare facilities and face severe shortages of both healthcare professionals and hospital beds in the country.

Similarly, this also highlights an urgent need of dedicated epidemiologists in the Disaster.

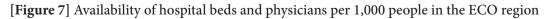
Management Authorities in the ECO region; whose services would be critical to respond to the COVID-19 pandemic.



[Figure 6] Current healthcare spending in the ECO countries (A) as % of GDP (B) per capita in USD



Source: WORLD BANK - COMPILED BY AUTHOR



3. Scientific and technological responses to the COVID-19

A. Turkey

Scientific and Technological Research Council of Turkey (TUBITAK), which is Turkey's top scientific body, has established COVID-19 Turkey Platform to mobilize scientific resources of 41 scientific institutions develop medicines and vaccines against COVID-19¹⁵⁾. Under COVID-19 Platform, 7 vaccine and 7 drug development projects are currently being undertaken.

Furthermore, TUBITAK has invested over US\$ 300 million for the development of 16 vaccine and other medicine projects over the past five years in Turkey¹⁶⁾.

Due to its advance scientific capabilities, Turkey is now self-sufficient in terms of manufacturing its own testing kits and develops its Polymerase Chain Reaction (PCR) tests. For example, a Turkish firm has recently produced a COVID-19 test that can yield results within five minutes without requiring trained personnel or expensive lab equipment¹⁷⁾.

B. Pakistan

The Higher Education Commission (HEC) of Pakistan has launched a programme supporting applied research in areas including disease surveillance and epidemiology, and in the rapid development and commercialization of products and services that will help the country control COVID-19.

On the product side, the commission is interested in promoting domestic manufacturing of low cost equipment and materials, including diagnostics, ventilators and personal protective equipment. Universities, technologists and researchers are invited



to submit proposals. Projects will last for six months or one year, with maximum funding of over US\$ 90,000¹⁸⁾.

The Pakistan Science Foundation has opened a Rs20 million (US\$ 19.5 Million) call for proposals for a public-private collaboration in the fields of technology and material development, infection prevention and control, and epidemiology, to fight COVID-19¹⁹⁾. Also, the Ministry of Information Technology and Telecom in Pakistan is providing funding support to high-impact and short time-to-market ideas that can be developed to tackle the most pressing challenges by COVID-19 outbreak using the application of Information and Communication Technologies (ICTs)²⁰⁾.

The International Center for Chemical and Biological Sciences (ICCBS) at the University of Karachi has been actively involved in the diagnostics, research and drug delivery system for the novel corona virus. The Jamil-ur-Rahman Center for Genome Research based at the ICCBS is undertaking the genomic analysis of COVID-19 from Pakistan by using next generation sequencing²¹⁾. This research will help to understand the genetic variations and their correlation with the disease severity, progression and clinical outcomes. The International Center has also been involved in the evaluation of protein-protein contact profiles between CoV2 spike protein and ACE2 to understand the dynamics of the event. The Center has also established largest biosafety level-III (BSL-III) laboratory in the country in response to the pandemic with a potential testing capacity of 2,400 tests per day.

C. Iran

Mustafa (PBUH) Science and Technology Foundation (MSTF) based in Iran have garnered the support from Scientists and Technologists of the Islamic World to contribute towards the detection, prevention, including drug development and vaccines for the COVID-19. In its 7th, Science and Technology Exchange Program (STEP) which will be organized online, will invite leading scientists from the Islamic world to discuss and share the scientific and technological resources to combat COVID-19 on May 28, 2020. MSTF is also collaborating with Sharif University of Technology to develop AI Med; if successful this could be an effective method to detect the COVID-19 cases at a large scale²²⁾.

D. Kazakhstan

The National Biotechnologies Centre and Scientific Research Institute of Biological Security of Kazakhstan is reportedly developing a vaccine against COVID-19²³⁾.

- 16) Daily Sabah. (2020, April 25). Turkey's top scientific body invests TL 2.3 billion on 16 vaccine projects over 5 years. Daily Sabah. https:// www.dailysabah.com/turkey/turkeys-top-scientific-body-invests-tl-23-billion-on-16-vaccine- projects-over-5-years/news
- 17) Daily Sabah, D. S., & AP. (2020, April 23). Turkish firm develops
 5-minute COVID-19 test. Daily Sabah. https://www.dailysabah.com/ turkey/turkish-firm-develops-5-minute-covid-19-test/news
- 18) Higher Education Commission, Pakistan. (2020). RAPID RESEARCH & INNOVATION INITIATIVE (RRII). Higher Education Commission, Pakistan. https://www.hec.gov.pk/english/services/RnD/RRIF/Pages/ default.aspx
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- 22) Mustafa Prize. (2020). Universal Access to AI-MED Covid-19 Detection System. http://www.mustafaprize.org. http://mustafaprize. org/news/?id=3171
- 23) Nurmaganbetova, Z. (2020, March 20). Kazakhstan developing vaccine against COVID 19. KAZINFORM. https://www.inform.kz/en/ kazakhstan-developing-vaccine-against-covid-19_a3627758

Bicer, A. (2020, February 4). COVID-19: Turkey making headway in vaccine development. Anadolu Ajansı. https://www.aa.com.tr/en/health/ covid-19-turkey-making-headway-in-vaccine-development/1789193

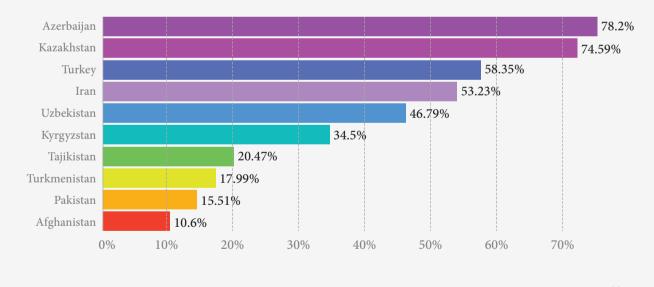
4. ICT in the ECO member countries

In combating the adverse effects of COVID-19 and enhancing societal and economic resilience, digital technology and internet connectivity have emerged as an essential tool and alternative to the physical equivalent. According to the World Bank, over 160 countries have mandated temporary school closures, leaving 1.6 billion children and youth out of school.

Here is the snapshot of internet connectivity in the ECO region. To tackle this challenge, ECO Member Countries need to promote and increase inclusive broadband connectivity to deliver remote learning and critical healthcare facilities during the pandemic.

Extended school closures in the Member Countries may cause not only loss of learning in the short-term, but also further loss in human capital and diminished economic opportunities in the long-term. To help mitigate the loss of learning, many countries are pursuing options to utilize remote learning to manage and cope with the crisis. However, without reliable connectivity, this would be a challenge to embark upon remote learning in the region.

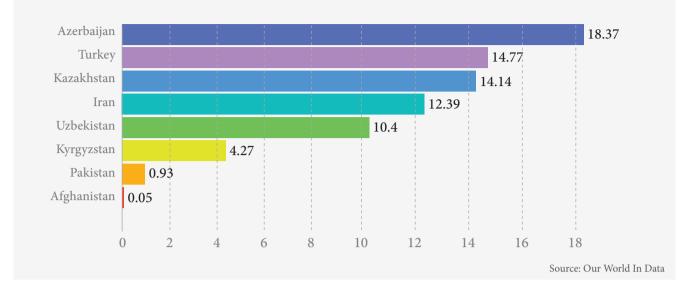
Figure 8 and 9 show that there exist serious gaps in internet connectivity in the region. Therefore, it is high time that ECO Member Countries develop a plan to augment the accessibility and connectivity in the region. The relevant Ministries of ICTs could liaise with international development partners such as Information Technology Union of United Nations and UN Broadband Commission to beef up their ICT infrastructure in the respective countries. During this pandemic, the resource availability and connectivity through broadband is critical to respond to the COVID-19 pandemic.



Source: Our World In Data

[Figure 8] Share of the population using the Internet

All individuals who have used the Internet in the last 3 months are counted as Internet users. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc.



[Figure 9] Broadband subscription per 100 people

Broadband subscriptions refer to fixed subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to, or greater than, 256 kbit/s

5. Economic and fiscal measures

The severity of this pandemic and its impact on economic consequences is unimaginable. No one knows yet exactly how the pandemic further develops and no one knows exactly the future path of economies worldwide. The IMF has revised its Global Economic Outlook for 2020. The following chart shows the impact of COVID-19 on real GDP growth of the ECO Member Countries.

However, in order to save lives and secure most urgent necessities for millions of people, it is important to concentrate on fast-track measures to contain the pandemic and mitigate its adverse impact on livelihood and economies. Virtually all countries in the world have responded to the COVID-19 crisis by implementing some fiscal and monetary measures. Below are the fiscal measures taken by the ECO Member countries. In response to this crisis, nearly all countries have undertaken fiscal and monetary measures to and redirected funds and financing towards healthcare emergencies. This brief considers the fiscal measures undertaken by the ECO Member Countries and their economic outlook for 2020 by the International Monetary Fund (IMF).

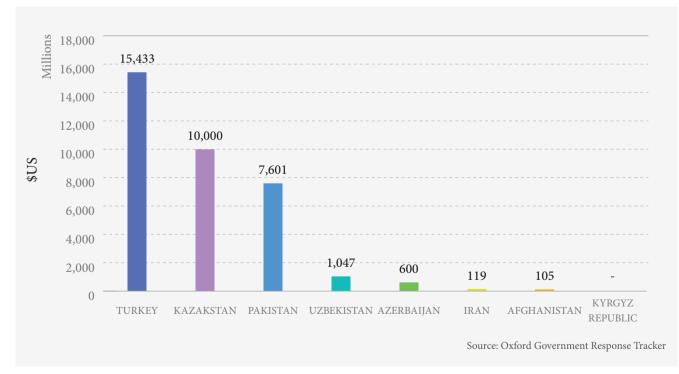
In order to keep the economy running despite lockdowns, to support health systems and other critical infrastructure and to mitigate the adverse economic shocks, ECO Member Countries must come together to support each in the fight against this pandemic.

6. Recommendations for the Member Countries

The COVID 19 pandemic requires decisive and swift actions to respond to this overwhelming challenge. Followings are some recommendations for the ECO Member Countries:



[Figure 10] Real GDP growth of ECO Mebmer Countries (annual percentage change)



[Figure 11] Fiscal measures in reponse to COVID-19, by ECO Member Countries

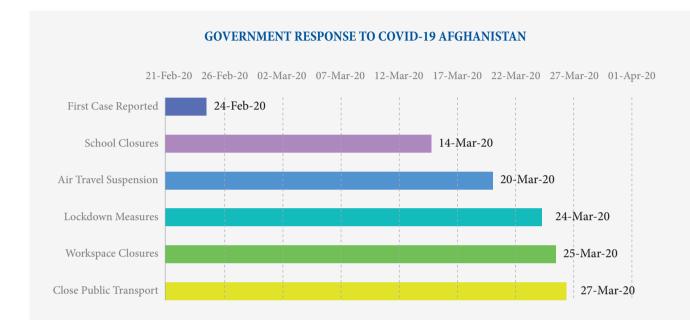
- 1. Increase the budget allocations for the health sector and provide immediate support for the long-term strengthening of the health sector;
- 2. Invest significant more resources on science, technology and innovation, particularly health and science education, so that member states are adequately prepared to prevent any daunting challenge in the future, and
- 3. Develop and strengthen capacities and capabilities of the scientific communities and development collaborative platforms amongst the universities and laboratories of the member countries to fund and scale up research for medical treatment and vaccine development for corona virus. This will increas the preparedness of the counteries to tackle any future epidemics and calamities as well.



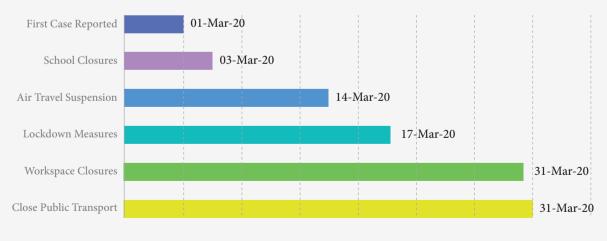
Supplementary Data 1

ECO Member Countries Response to COVID-19

Oxford University Response Tracker for COVID-19 - Complied by Author²⁴⁾

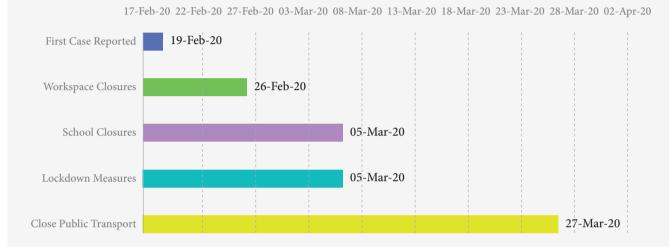


GOVERNMENT RESPONSE TO COVID-19 AZERBAIJAN



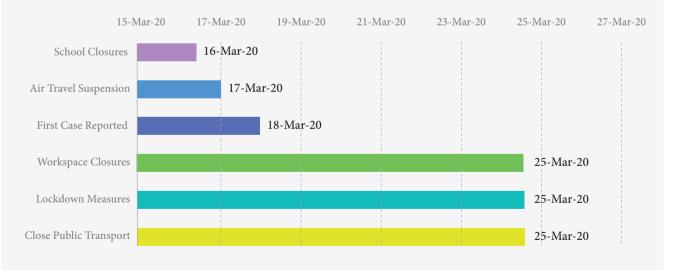
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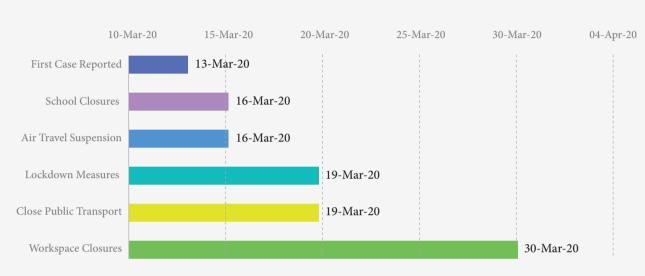
24) Blavatnik School of Government. (2020). OxCGRT. https://covidtracker.bsg.ox.ac.uk/



GOVERNMENT RESPONSE TO COVID-19 IRAN

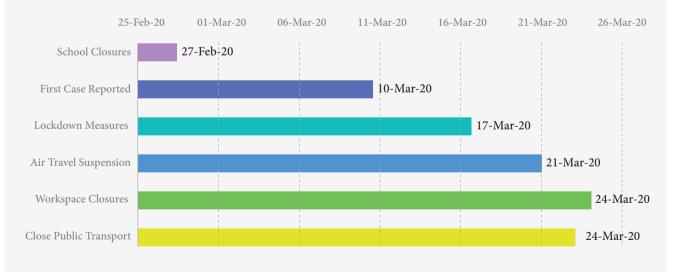
GOVERNMENT RESPONSE TO COVID-19 KYRGYZ REPUBLIC





GOVERNMENT RESPONSE TO COVID-19 KAZAKHSTAN

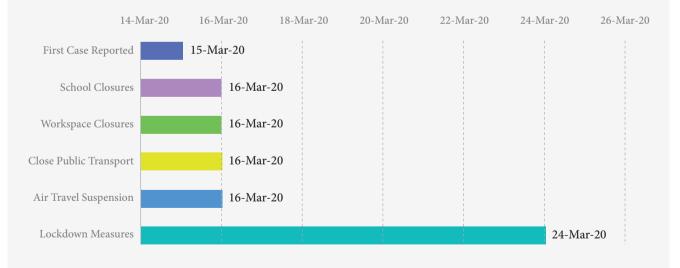
GOVERNMENT RESPONSE TO COVID-19 PAKISTAN





GOVERNMENT RESPONSE TO COVID-19 TURKEY

GOVERNMENT RESPONSE TO COVID-19 UZBEKISTAN



Supplementary Data 2

