Combating COVID 19: Policy Options for Pakistan

• It is difficult to manage economy and corona simultaneously. People should be put over economy in these testing times.
• The budget strategy document for 2020-21 prepared in pre-COVID 19 context has turned irrelevant. National Economic Council should revise the estimates for the forthcoming budget.
• An urgent meeting of Council of Common Interest is needed to show uniformity and solidarity among provinces.
• NDMA, IPC and health ministry must prepare a combined strategy to save the lives of people.
• There is a need to divert unutilized funds and allocations from different institutions like BISP, Workers Welfare Fund, PSDP, Baitul Maal, etc. to finance and implement the response strategy.
Contents

Combating COVID 19: Policy Options for Pakistan ................................................................. 3
Spread of COVID-19: What Pakistan needs to do to tackle ‘Black Swan Event’ .................. 5
Any climatic event can double impact of COVID-19 ............................................................... 7
COVID-19 outbreak and its overall impact on different sectors ............................................ 9
COVID-19 may be more severe than global trade shocks ....................................................... 10
Hybrid Warfare: Challenges for Pakistan ............................................................................. 11
Air Quality Research in Pakistan: A Review .......................................................................... 12
Challenges to sustainable development financing in Pakistan ............................................. 13
Digitalizing Social Protection Systems amid COVID-19 ...................................................... 15

Editor: Saleem Khilji
"Combating COVID 19: Policy Options for Pakistan"

An online dialogue titled: 'Combating COVID 19: Policy Options for Pakistan', was organized by the Sustainable Development Policy Institute on 19th March 2020. Federal Minister for Inter Provincial Coordination Dr Fehmida Mirza also participated in the online dialogue on special invitation. The participants gave following policy recommendations:

**Political and Institutional Harmony**
This is a time when all political parties should set aside their political and ideological differences. We will have to face this pandemic as a nation rather than groups of people. There is a need for federal and provincial political leadership to be on the same page. There is a dire need to call an urgent meeting of Council of Common Interest; it will send good signals among provinces and show uniformity and solidarity. The National Disaster Management Authority, Inter Provincial Coordination Ministry, and Federal Health Ministry must jointly coordinate with all provinces and prepare a combined strategy to save the lives of people from COVID-19 outbreak in the country. The government needs to divert funds from different institutions like BISP, Workers Welfare Fund, PSDP, Baitul Maal etc., to finance such strategy. NDMA and PDMA websites don’t have information regarding the current situation in the country. NDMA should play a pro-active role, as it has a rich experience of dealing with emergencies.

**Economy Matters but Life Matters More**
It is difficult to manage economy and COVID-19 issue simultaneously. The priority should be to save people first and economy later. Liquidity injection is needed for two groups; those which fall in poverty band and the small businesses/firms which have to pay their bills and salaries. The government will get some cushion to do so as it is expected to save US$5 billion from oil import bill. IMF, WB and ADB are making emergency funds available for developing countries. We have to build our case to get benefit from those funds. The budget strategy document for 2020-21 is prepared in pre-corona context and has turned irrelevant. The National Economic Council should look into revising estimates for forthcoming budget.

**Communication Strategy**
A succinct communication strategy is required to communicate with people of Pakistan. Such strategy should focus on reassuring the people about steps taken by the government, while making them aware of the gravity of the situation. Ministry of Information/ISPR should prepare uniform public service messages breaking different myths about COVID19 in vernacular languages. Mainstream media and FM radio stations should be asked to run these messages for educating the masses. People of remote areas have little information about seriousness of the disease. Local NGOs, local leadership and local self-help groups should be contacted to create awareness in far-off areas of Sindh, Balochistan and Southern Punjab. Religious scholars should be taken on board. Imam Masjids should be requested to promote volunteerism and local philanthropy.

**Health Care**
Testing and screening at mass level is required to contain the spread of this disease. Safety concern of health care staff should be addressed on priority. Hospitals and medical facilities should start telemedicine for the patients who have ailments other than COVID-19. This would help people with compromised immunity system to avoid unnecessary exposure. We not only require ventilators but also the trained staff to operate them. The government should do a need assessment of trained technical staff and get ready to fill in the gaps. Along with big cities, the government needs to focus on remote areas where there are no health facilities. BHUs
should be made operational there and their staff should be oriented about identifying the symptoms of COVID19 so that any potential cases in remote areas may be referred for immediate screening.
The retired and reserve paramedics should be called back and trained to look after victims in remote areas.

**Containment as pre-cautionary measures**
Social distancing and self-isolation are very important for the containment of spread of disease. Otherwise, we have to go for complete lockdown which is worst case scenario. There is a need to train people in social distancing and self-isolation. We should learn from Japan and focus on social distancing and isolation measures. To protect our daily wagers, street vendors and the poor unemployed labour, we should not only make use of existing social safety nets but also mobilize private philanthropists. To increase the economic resilience of existing BISP beneficiaries, they should be given at least two advance payments of their stipend. It is difficult to target daily wagers for providing relief. However, a relief in utility bills may be provided for them using number of electricity units consumed as proxy indicator.

**Volunteers in case of lockdown**
In the coming days, an increased number of local volunteers will be required. Federal and provincial governments should declare their respective ministries/departments that may prepare the SOPs for such volunteers and provide them online trainings, where required, for self help community service in case a partial/complete lockdown becomes necessary. The government should be ready for a complete lockdown if the situation worsens. To prepare for a complete or partial lockdown, besides volunteers, local institutions with some early response system must be identified. These institutions can help in distribution of food, medicine and other daily use items.

**Supply of Essential Items**
While people need to refrain themselves from panic buying, the government needs to control practices of price gouging and hoarding of food and basic survival items. Utility Stores Corporation may be used for uninterrupted provision of these items. There is a need to prepare a list of required household items and medicines in case the disease spread out to whole of the country. Philanthropy groups and organizations should be asked to arrange their supplies as per that list.

**SOPs for handling bodies**
There are reports that Edhi staff shifted a body in Karachi without knowing that it was a Corona victim. The government should seek the help of religious leaders to announce an Islamic way of burying the deceased without compromising on safety and security of their near and dear ones.

**Participants of Dialogue**
Dr Abid Qaiyum Suleri
Dr Vaqar Ahmed
Dr Sajid Amin
Dr Naveed Iftikhar
Mr Shahjahan Chaudhry
Mr Qasim Shah
Ms Ariba Shahid
Mr Saleem Khilji
Mr Moazzam Bhatti
Ms Maryam Shabbir
Miss Ayesha Qaisrani
COVID-19: What Pakistan Needs to Do to Tackle ‘Black Swan Event’

Dr Abid Qaiyum Suleri

In Roman literature, the word ‘black swan’ was used as metaphor to express impossibility as it was perceived that swans were always white. Later, with the discovery of black swans in Australia in 1697, the metaphor remained in use to express an impossibility that was later disproven. Nassim Nicholas Taleb, a Lebanese-American writer and Statistician, used the phrase ‘black swan events’ in 2007 to describe the events which were extremely rare, undirected, unpredictable and carrying an extreme negative or positive impact. The third characteristic of a black swan event, in Taleb’s words, is that after the first recorded instance of the event, it is rationalized by hindsight, as if it could have been expected. Taleb regards almost all major scientific discoveries, historical events and artistic accomplishments as ‘black swans’.

Spread of COVID-19 or corona virus is yet another black swan event. This rare virus turned into a pandemic within few weeks of the first reported case in China. One may argue that China got caught flatfooted. However, rest of the world, and especially the developed world had time to prepare for this outbreak. Yet they failed to slow down early spread of the disease which left to itself, doubles every 5-6 days.

Initial outbreak from China and Iran

Pakistan borders two of the initial hubs of Coronavirus outbreak, i.e. Wuhan (China) and Qom (Iran). In the beginning, all eyes were on China, that’s why the focus of screening in Pakistan remained on passengers returning from China. The Chinese government’s decision not to evacuate Pakistani students from its land and let its medical system take care of them helped in containing the early spread of disease. However, the disease did enter Pakistan through passengers returning from Iran and then from the US and Europe.

As of 19th March 2020, the number of Coronavirus patients in Pakistan is 307 while two deaths due to the disease in Pakistan were reported on March 18 in KP. The deceased were returned from Saudi Arabia and Abu Dhabi. Latest situation of Corona victims compiled across the country from various sources including the government released data as on 19th March is as under:

<table>
<thead>
<tr>
<th></th>
<th>Islamabad</th>
<th>Sindh</th>
<th>Punjab</th>
<th>Khyber Pakhtunkhwa</th>
<th>Balochistan</th>
<th>Gilgit-Baltistan</th>
<th>AJK</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Corona patients</td>
<td>7</td>
<td>211</td>
<td>33</td>
<td>19</td>
<td>23</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>No. of Deaths</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

SITUATION OF CORONA VICTIMS IN PAKISTAN
One may argue that the sample size of population screened for Coronavirus in a country of 220 million inhabitants is too little and there may be potentially more undetected cases which may exponentially multiply and appear in next few weeks after their incubation period completes.

What Iran and Italy could have done better?
Iran and Italy made the mistake of not enforcing an early contingency plan of social distancing. By the time they acted, it was already too late. In that context, recent measures by the government of Pakistan for social distancing (including closure of educational institutes; ban on public gatherings in cinemas, wedding halls, sports grounds, conferences; closure of its western borders and diversion of all international flights to only three airports) would be helpful in containing the spread of the disease. However, social distancing and self-isolation in a country like Pakistan where majority of population is not entitled to a sick leave-pay or is not covered by any universal social safety net, is extremely difficult. Even social distancing on its own is not enough to cope with the pandemic.

Intensive care
A recent study of Covid-19 in China finds that 5% of patients needed to be admitted to an intensive care unit (ICU), with many needing intensive ventilation or use of a more sophisticated machine that oxygenates blood externally. Till last week, the Italian hospitals that offer world-class health care, were quite confident of coping with the disease. However, they underestimated the demand of ventilators and oxygen for the virus infected patients and that resulted in highest number of fatalities by Coronavirus outside China.

Chinese measures to cope with COVID-19
With the hope that there is no second wave of virus outbreak in China, let us see what China did so far to cope with COVID-19. It put its Wuhan city residents under strict quarantine and make sure that no one was deprived of basic food commodities. Secondly, it went for mass testing and screening. It also started an intensive contact tracing to disrupt transmission chain and provided ample human and financial resources to its hospitals. Realizing that COVID-19 was not only a medical emergency, it also directed the banks and revenue collecting agencies to go soft on their borrowers/clients.

What Pakistan did so far?
Pakistan is neither an authoritarian nor a welfare state. It can neither confine its citizens to their homes nor can they provide them with free food and other utilities. This implies that strict precautionary measures such as keeping people in quarantine may not work here. Voluntary isolation of those having mild symptoms is not possible either, as majority of people cannot miss their daily earnings. This is where federal and provincial governments would have to join hands and devise a mechanism for providing relief to lower income segments of the society who may face further destitution as a result of social distancing and voluntary isolation. Advance payments of stipend to BISP beneficiaries may be one of the ways to reduce people’s hardships if some parts of the country have to be locked down.

What needs to be done?
Screening of potential Corona patients at mass level should be another priority to fight against this pandemic, especially when outbreak is small and it is possible to contain the disease. The government has announced a helpline “1166”, where any suspected patient of Coronavirus may contact for screening and treatment. However, instead of waiting for patients to come forward for testing, health authorities need to be more proactive and do random screening in the potential hotspots of this disease.

Medical preparedness
After identifying the patients through screening, the next step would be to treat them. We have limited number of hospitals in each province with rare “isolation facilities” and those hospitals too are understaffed and under resourced. In KP, the total number of ventilators in public and private hospitals is reportedly 150, while in Baluchistan, the total number of ventilators in public sector hospitals is 49. Hence, there is a supply-demand gap analysis not only of human resources but also of supplies such as externally-blood-oxygenating machines is crucial.

Getting benefits from funding vehicles
Timely bridging the gap through diverting public sector development funds, through engaging private sector in a public-private partnership mode, inviting individual philanthropists, and getting benefit from special funding vehicles devised by multilateral funding agencies (such as World Bank’s $12 billion fund, and IMF’s $850 million fund established for this purpose) is need of the hour. Remember, well-resourced health care system of Italy failed to provide too many ventilators in a short period of time. Hence, the aim here is not just to raise funds but to ensure that ventilators and other medical supplies are available in isolation centers.
**Economy Aspect**

Going beyond the medical aspects, there was a valid demand for reduction in interest rate to increase our economic resilience in the context of coronavirus. The State Bank of Pakistan has reduced the interest rate from 13.25 to 12.50 per cent. Many say that more reduction is needed. However, bearish performance of stock markets in UK, Europe and USA (where the interest rate is extremely low) after the outbreak of pandemics) implies that mere lowering of interest rates would not rescue economies. Businesses and employers would require temporary relief on tax and wage costs too. It is argued that Pakistan neither has the fiscal cushion to provide tax cuts and wage costs, nor a policy space to significantly reduce interest rate in an IMF program. However, these are unusual times and IMF programs show flexibility to exclude from the assessment of fiscal performance those events that are not derived from policy slippage. This would mean that extra spending on health and logistics to combat the Coronavirus will not be part of Pakistan’s budget deficit.

**On our external and domestic fronts**

On external front, we need to keep in mind that merely the word “pandemic” signifies its global nature. No single country/nation can deal with it separately. Countries need to work together on treatment protocols, therapeutics, what worked, what did not work (and why) to cope with COVID-19. In this context, SAARC meeting on Coronavirus was an important beginning. Besides it’s time for the UN and WHO to come out for a generous financial assistance of the poor economies.

On domestic front, facemasks and hand sanitizers are either not available in the markets, or available at very high prices. Prime Minister’s advisor on health also indicated possible shortages of food supplies in the weeks to come. To keep the supplies normal, consumers would have to resist panic buying, while the governments (at all levels) would have to control hoarding of essential commodities. Smooth supplies of essential commodities would lessen the pain of troubled times.

**Conclusion**

While hinting upon how to cope with black swan events, Taleb says that what may be a black swan surprise for a turkey is not a black swan surprise to its butcher; hence the objective should be to “avoid being the turkey” by identifying areas of vulnerability in order to "turn the Black Swans white”. It is time to act and see how far and how quickly Pakistan can reduce its vulnerabilities to turn the Black Swan of Coronavirus into a White Swan of Safety.

---

**Any Climatic Event Can Double Impact of COVID-19**

- An inclusive policy response the need of hour

**Shakeel Ahmed Ramay**

With each passing day, COVID-19 is becoming a source of fear and panic bringing the lives of millions of people under severe threat. People with weak immune system especially the infants and the above 50 are the majority victims. Economies across the world are facing brutal consequences; stock exchanges are stumbling; and private companies are doing lay-offs. A tough and mindless race to accumulate daily use commodities is racking the markets. The impact may be more complicated and painful for the developing countries having very limited or no resources to combat the deadly challenge. One can say a wave of fear and panic rules the world right now and the biggest question before the world leadership is and will be how to prepare their people to come out of panic and fear. Social distancing, containment, lockdown and quarantine are today’s buzzwords.

Assume … some major climatic event hit the world at the moment and doubled the agony of human sufferings on the earth. Pandemic plus climatic event would be scale of catastrophe. Although we cannot capture a full spectrum of impact, we can try to understand by decoding impacts of past climatic events. The Global Climate Risk Index 2019 has ranked Pakistan on 5th position among the countries more vulnerable to climate change. From 1998 to 2017, climate change had incurred an average loss of US$ 3.9 billion per year. In terms of GDP, the cost is 0.5 percent on annual basis. Further, Pakistan suffered an estimated loss of US$ 25.3 billion (5 % of GDP) due to 2010 flood. The long spell of drought that stretched from 1999 to 2003 played havoc with the country’s economy depriving millions of people from their livelihoods and forcing them to migration, especially in Balochistan, southern Punjab and interior Sindh. Health is another area, which was impacted by climate change. Pakistan already has witnessed a wide spread of dengue fever in last few years. Heatwave is another recent phenomenon that killed many people.
Global situation had not been much encouraging since the last three decades. In 2019, Europe was hit by the worst heatwave, which broke the previous records of temperature. Europe struggled to absorb the shock, but to some extent. If it happens again this year, the countries will suffer at a greater scale causing a huge number of casualties, as after China, Europe is the worst-hit by COVID-19 where the number of casualties is touching thousands with lesser hopes of its early control.

Floods, droughts, earthquakes as well as epidemics have hit the South of the world. Three South Asian countries are among top 10 most vulnerable countries to climate change. An Oxfam study reads that the disasters had been triple during the last 30 years. Australian Wildfire was one of the worst climate-related disasters that destroyed trees on 10 million acres of lands as well as other properties. Rise in sea level is another area of concern. It has witnessed a rise of 2.5 times faster during the period between 2006 to 2016. Besides, climate change related disasters have also displaced approximately 20 million people in last few years. The United Nations Environment Program suggested that the world need US$ 140-300 billion on yearly basis by 2030 to combat the challenge of climate change.

According to experts, the climatic impacts may be more severe in future. Health will be one of the most affected area due to climate change. It will have multiple implications for people and economies. In 2018, the World Health Organization had predicted that health would be severely impacted by climate change. According to estimates, around 250,000 additional people will die every year due to heat stress, malaria, diarrhea, etc. between 2030-2050. Climate change will also add up to existing spending on health by US$ 2 billion per year by the end of 2030. In 2019, Georgetown University Medical Center predicted that one billion people will be exposed to mosquito related or respiratory diseases till end of century.

Now, take the case of COVID-19 which is putting huge pressure on global economy. Countries are spending billions of dollars to prevent and combat it. People are losing jobs and trade is on decline (US$ 50 billion lost). In Ireland, 140,000 jobs have been lost. Similarly, 3.5 million people in the US will likely to lose their jobs. In case of Pakistan, we don’t have any estimates or mechanism to calculate the job losses. However, it will be huge, and contribute to increase the extent of poverty. Now, the question is whether world can fight another climate change related disaster at this point of time? The answer is no.

We need to prepare for unpredictable. More specifically, a combo of unpredictable. Thus, the world needs to calculate the probability and look for different scenarios, i.e. 1) impact on health, 2) impact on economy, 3) vulnerability of countries and 4) ability of countries to fight back.

First of all, our government should conduct scientific studies to find the probability and possible impacts. The scientific studies should be followed by the policy frameworks and action plans. These frameworks and action plans should be supported by adequate resources in term of human, technology and finance. More investment on capacity building to face the uncertain scenarios is the need of hour. It will help counter the panic and give more space to counter the possible crisis in a better way.

The world must keep in mind that the cost of in-action or in-efficiency would be very high, may be beyond the capacity of human race. The very existence of human race would be at stake, then. We can learn this from our past and present experiences. For example, countries with less preparedness to combat COVID-19 are facing severe consequences. People even, in the developed countries are facing pain and fear of unknown due to lack of preparedness. That’s why an inclusive collective response policy is the need of hour.

(-Courtesy Daily Times, Islamabad)
COVID-19 outbreak and its overall impact on different sectors

Syed Shujaat Ahmed

Pandemics are large-scale outbreaks of infectious diseases that can greatly increase morbidity and mortality over a wide geographic area and cause heavy economic disruption especially in oil prices, foreign direct investment, travel & tourism, etc. With the growing globalization as well as research going on in different fields with different ventures, a number of external shocks have also occurred in various shapes such as global financial crisis, pandemics and other forms of calamities. There had been a number of impacts observed while looking at different sectors of economy.

Oil Prices: Global impact on oil prices is one of the significant impacts. As it is a known fact that China being one of the biggest oil importers has been impacted negatively. This has created a demand supply gap resulting in lowering of oil prices. This lowering of oil prices can have impact on the oil producing economies, employment and political economy as well.

Travel, tourism and entertainment: In the developed world as travel, tourism and entertainment activities have significant contribution to GDP, an overall decline in economy will have negative influence on the overall industry.

Investment: Uncertainty has led to decline in investment activities thus dropping Foreign Direct Investment worldwide. This uncertainty has further influenced the market negatively, resulting in investors taking out money from the market (i.e. pulling out of investment).

With these three major economic impacts where developed world has a hit, developing world is now faced by same type of constraints and challenges. In the Pakistan’s perspective, investment uncertainty and global price shocks have influenced the stock market causing a bigger decline in investment. Similarly, international transactions & remittances will be impacted by layoffs, leave without pay and shutdowns in Gulf Cooperation Council countries, EU and US, thus having impact on balance of payment that can be reflected through imports.

Overall impact will be in the form of volatility occurring in the supply framework. This impact will be mainly because of imports coming into Pakistan from those countries where virus has costed significantly.

The impact on balance of payment can further have influence on macroeconomic indicators such as employment, inflation, behavior of exchange rate (Pakistani rupee has gone down by almost 4 rupees) and fears of recession in those parts of the world with whom Pakistan trades.

Another significance impact may be on migration remittances, and aid inflows in the developing countries. This aid inflow can be linked to the capacity of developed countries to meet the development or welfare needs that could see a hit. This hit will be due to expansion of safety net programmes of the developed countries for which there will be more allocations on priority.

Further, international travel, especially incoming business & tourist arrivals will be impacted as companies, governments and other agencies have suspended non-essential travel. Even in best case scenario, revenues for travel industry will wipe out. Also, the likely domestic slowdown in economic activity (office, school & public event closures) will cause a significant slow-down consumption, despite lower than expected inflation.

The impact can be further observed in the long-term on tourism as Pakistan focused more in current time period on the tourism side of the economy. Not so grown industry of tourism which was about to take a baby step towards development is likely to go down and may see no growth in near future and this impact can stretch for 2-3 years.

Similarly, another impact which is mostly visible in markets is the impact of hoardings and purchasing in panic on the price control and price mechanisms. This has been observed particularly in the case of pharmacies where prices of sanitizers have surged up.

Looking at these impacts what Pakistan has to do more efforts for rescuing its economy. First and foremost, there is a need to look into balancing domestic demand and supply while looking at the current economic shocks and balance the economy. Second, to overcome the investment uncertainty and look into the response of market, State Bank of Pakistan needs to do early adjustments into the system to make investor confident about the system. SBP in this regard should gradually influence the interest rate through monetary policy.

Balance of payment is the third factor, which again needs to be adjusted while looking at the domestic demand and supply as borders closure will have impact on the transportation of goods and services.

Fourth, to further minimize the losses and drop down the impact of this ongoing pandemic, there is a need to have more focus on social safety measures in the forms of expanded BISP and Ehsaas programme.
Fifth, to minimize the losses to the economy, there is a need for active involvement of all stakeholders and their involvement in producing local research which can enhance the knowledge output and this could further strengthen the way forward to devise a framework for economy. Thus, in short, corona pandemic will have impact on Pakistan and its economy because of investment uncertainty, exogenous shocks and impacts on nascent industries such as tourism (growth may not be expanded). These impacts or losses can be reduced with the help of more market balancing approach locally, more local research and strengthening the social safety measures.

COVID - 19 May Be More Severe Than Global Trade Shocks

By Khansa Naeem

Just two and half months ago, the global economy seemed all fine. Amid diplomatic and trade tensions, though the global financial market fluctuations were there, the global economy was on way to recovery. Now, after a sudden outbreak COVID-19, all bets are off. The pandemic has made every one clear that it has potential to disrupt the global economy. The pandemic originated from China and till now it has spread to the whole world infecting about 0.6 million people. According to WHO, the outbreak has hit hardest to 10 economies. They include China itself, US, Japan, UK, Italy, France, Germany, Iran, and India. Majority of these economies are considered the world’s largest economies and estimated to fulfill 60 per cent of global supply and demand, 67 per cent of global manufacturing, 4 and 9 per cent of global manufacturing export. Many of these countries have prominent role in global value chain as shown in the figure. So, any hindrance in their production capability may create ‘supply-chain contagion’ in other economies. Less-affected countries will find it harder to access imported manufacturing inputs from the most affected nations.

Source: World Bank’s World Data Bank

The COVID-19 is presumed as supply shock and demand shock as well, so it is for sure that the epidemic will impact the international trade. These supply and demand shocks will cause global repercussions. Likewise, if pandemic and aligned preventative strategies and actions slow down the aggregate demand of these economies, global trade will automatically set back.

Being global manufacturing giants, these countries are significant supplier of manufacturing inputs to one another or rest of the world. For instance, the industrial components of China are always in hot-demand, so the supply shock in any of these six economies is likely to create ‘supply chain contagion’.

The COVID-19 as supply shock will reduce the export of the most affected economies whereas as a demand shock, it will reduce the imports. Imports will fall in trade partner economies that are severely affected. Given the economic significance of these most affected countries, the demand and supply shock will trigger large drops in global trade flows. Similar to goods trade, trade in service for instance tourism services, travelling service and hotel services have already been affected by supply and demand shock of the pandemic. But experts say that other services like financial services and medical services are likely to be less affected. According to an expert from Hitotsubashi University, Japan, ‘the pandemic
may end up on incrementing trade in services, as the demand and supply shock will encourage remote inter-actions’.

COVID-19 and Global Trade Shock of 2008-09
The global trade crisis of 2008-09 that lasted from third quarter of 2008 to second quarter of 2009 recorded the highest decline of global trade after Great Depression. Keeping in view the intensity and suddenness of COVID-19, it is perceived that it will hit global economy with the more intensity than global crisis. Global Crisis 2008-09 was demand shock and on supply side it led to financial crisis (mostly in banking and finance) only. The industrial outputs were affected by recession but the crisis itself didn’t have damaged the industrial output directly. As COVID-19 is depicted to affect both sides of economy, many experts believe to overcome supply shock we have option to diversify and shift the operational units across other Asian or developing economies where cost of production is low.

Hybrid Warfare: Challenges for Pakistan

Brigadier Mohammad Yasin (Retired)

‘Fake news and propaganda used in 2016 US polls may also be used in our elections’
The emerging technologies have changed the military threat environment. Adversaries now use non-military means to achieve their objectives. In future wars, conventional military forces, irregular forces, terrorist groups and non-state actors will be present in the same operational area. Even before moving into the operational area, the adversary will be weakened through political, economic and cyber warfare means by following the Sun Tzu’s concept of war that: “To fight and conquer in all our battles is not supreme excellence, supreme excellence consists in breaking the enemy resistance without fighting. The supreme art of war is to subdue the enemy without fighting. Know your enemy and know yourself and you can fight a hundred battles”.

The nature of military threat has changed. "Every age has its own kind of war, its own limiting conditions, and its own peculiar preconceptions" (Clausewitz 1832). Using non- military means to achieve strategic and operational objectives is now the normal trend. We can expect even more changes in the military threat environment. With technological advances, like aerial drones which can gather the required intelligence and can be used for mass communication and propaganda, the adversary can make flexible plans. Artificial intelligence can fake a person’s voice. Fake news and propaganda, particularly targeting the soldiers during operations like it was done by the Russia in Ukraine can turn the tides. In Ukraine, soldiers’ phones were compromised. Their families receive messages that their dear ones had been killed. The soldiers received fake orders to surrender. Another example is the US elections 2016, in which Hillary Clinton’s pass word and emails were stolen and used against her through a propaganda campaign to mislead the voters. Although prior information was available of this move but defensive measures were not taken.

In recent years, this pattern of warfare is termed as hybrid warfare which has been defined in many ways. The United States Joint Forces Commend defines it as: “any adversary that simultaneously and adaptively employs a tailored mix of conventional, irregular, terrorism and criminal means or activities in the operational battle space. Rather than a single entity, a hybrid threat or challenge may be a combination of state and non-state actors”. The concept is not new. It has been used in Vietnam, by Israel, Hezbollah, United States against Iran and India against Pakistan.

Prior to Pakistan’s war with India in 1971, it faced naval blockade between West and East Pakistan (now Bangladesh) and also air space between the two wings of the country could not be used. The country’s economy seriously suffered. Since then Pakistan has been repeatedly threatened by India with hybrid warfare. Rawat, the Indian General, warned Pakistan of Cold War doctrine (Proactive Doctrine) which meant that India would launch a rapid and decisive offensive of Blitzkrieg style to achieve its objective within 48 to 72 hours using integrated battle groups. Such tactics are a part of hybrid warfare. Pakistan responded with developing low-yield tactical nuclear weapons. That deterred the Indian designs.

What are the challenges posed by hybrid warfare? The hybrid warfare is defused, ambiguous and asymmetrical. Non-state actors are used as proxies. In such an environment, it’s difficult for the victim or the defender to take timely and sound decisions. These challenges are likely to endure and intensify. Our readiness to face the challenges of hybrid warfare is marred by our weaknesses. We have a weak economy; we lack national cohesion; we suffer from unprincipled politics; low religious and social ethics; remnants of terrorism still haunt us; there is lack of awareness at the ground level and above all there is absence of a joint or a triservice command. The last weakness is serious because the existing command structure is decentralized and loose. These are serious challenges for Pakistan. This is so because our Eastern neighbor
continues to be hostile and will always exploit our weaknesses. What we should do to be prepared and ready to meet the hybrid threats? We should bear in mind that military is not the only way to execute hybrid warfare. Diplomatic, political, information, cyber, economic, financial and legal aspects are also important. The military should not take on the full responsibility of hybrid warfare. It should concentrate to enhance its capability of warfare at a broader level. A hybrid adversary is very flexible which means the opponent must develop the capability of detecting hybrid threats and the agility to countering them and creating an environment of close cooperation between civil and military. Digitalization of battle decisions will be a must to collect and analyze a large amount of data quickly to make timely and sound decisions.

Above all, we must deeply reflect as to how we can be a cohesive nation united at all times to face the hovering threats of hybrid war? How long politics without principles will remain the way of politicians? How can we create the religious harmony and embed strong social ethics? Awareness, close civil military collaboration, creation of an effective triservice command, timely and sound decisions to face the challenges are some of the steps that we can take to ensure our preparedness to face the dangers.

----------------------------------------------------------

Air Quality Research in Pakistan – A Review

Mahmood A. Khwaja, Tahira Shams & Quratulain

The ambient air, depending upon natural phenomena and human activities, may contain a number of pollutants, harmful not only to human health (especially vulnerable population) but also to animals and plants. The 6 pollutants that account for the large majority of air pollution worldwide are carbon monoxide (CO), oxides of nitrogen (NOx), sulfur dioxide (SO2), ozone (O3), lead (Pb) and suspended particulate matter (SPM). Burning of fossil fuel, wastes and manufacturing processes have directly impacted ambient air quality. Research work on indoor/outdoor air quality in Pakistan and analytical data on levels of some main air contaminants has been reported from time to time. The same has been compiled, mainly between 2001 and 2018, reviewed, summarized and described below:

Quadir (2002) studied trends and challenges for air quality management in Pakistani cities and suggested its improvement by integrating a number of technical and management options, and financial incentives. These may include monitoring and evaluation, cost benefit analyses of abatement and control measures, development and implementation of air A study on lead exposure and children has been reported by Khwaja (2003; 2005)). Blood lead levels were studied in school children, resulting from leaded petrol use and increasing road traffic in The reported level of Lead in air (in microgram/cubic centimeter) was 0.13-0.24 in Karachi (1980-81), 0.21-0.79 in Peshawar (1994-95), 0.89 – 7.85 in Lahore (1999-2000) and 0.71 – 10.00 in Rawalpindi (1999 – 2000). These results indicate a very alarming increase and high levels of lead in the ambient air at the sites and time of monitoring. The overall mean blood lead levels (in microgram per deciliter) in school children (n=900 boys & girls)) below 15 years of age in three main cities were found to be 22.8 +/- 3.30, 19.00 +/- 6.48 and 2.30 +/- 0.19 (rural site). Recommendations of National environmental action plan (NEAP) with special reference to clean air and provision of clean fuel have been briefly described and discussed (Khwaja, 2003)

Some key environmental issues about air quality in Pakistan have been assessed and discussed by Khwaja and Khan (2005), using the Pressure, State, Impact and Response (P-S-I-R) framework The state of air quality has been assessed by examining the emission levels of air pollutants and ambient air quality. The average increase in sulfur dioxide across major emitting sectors (industry, transport and power) has been 23-fold over the past 20 years. Similarly, nitrogen oxides increased to 25-fold in the power sector and carbon dioxide increased an average of fourfold. Ambient air quality data show that carbon monoxide levels in Karachi and Lahore considerably exceed WHO recommended levels. Particulate matter content cross safety levels in the major industrial cities in the Punjab province. Pakistan’s per capita greenhouse gas (GHG) emissions are far below the global average (Khwaja and Khan, 2005) The losses attributed to air pollution, in terms of health care costs, amount to 500 million dollars a year. To combat air pollution, the government has formulated a National Environment Action Plan (NEAP). According to Aziz (2006) there was no reliable epidemiological/toxicological monitoring system in place in Pakistan to provide a basis for establishing guidelines for various air pollutants. Depending upon natural phenomena and human activities, the ambient air may contain a number of pollutants. Depending on the pollutant, different averaging times are considered in establishing the guideline values of human exposure to air pollutants. Based on these, and available data on the existing air pollution situation in Pakistan, national air quality guidelines are proposed for 6 major pollutants (Aziz, 2006) Brick kilns are considered to be a major source of Dioxin/Furans POPs releases to air & other segments of environment. Petrich & Khwaja (2006) studied persistent organic pollutants (POPs) in different samples of hospitals waste incineration and brick kiln residues in Pakistan. Dioxins levels in ash samples from
Pakistan are lower than many observed in waste incineration fly ash, in other countries but are much higher than those found in bottom ash. In the present study, large scale of releases as well as large scale sources were not examined but it is very useful to focus further studies within the country on other significant U-POP’s sources and different modes of operation of brick kiln (Petrich and Khwaja, 2006)

In 2007, concentrations and seasonal variations of air pollutants were determined by Ghauri et.al, in major urban centers to develop a baseline air quality data in Pakistan. This study reveals that the highest concentrations of CO were observed at Quetta (14 ppm) while other pollutants like SO2 (52.5 ppb), NOx (60.75 ppb) and O3 (50 ppb) were higher at Lahore compared to other urban centers like Karachi, Peshawar etc. Highest particulate load was found at Lahore. Sulphur dioxide and Ozone levels at all sites were within USEPA limits. In all major cities the highest levels were recorded at major intersections and variations were directly correlated with traffic density. These pollutants showed highest levels in summer and spring while lowest were observed in winter and monsoon. A data bank has been generated for future planning and air pollution impact studies (Ghauri et al, 2007)

Urban air quality in the Asian region (15 countries including Pakistan) has been reported by Philip et al (2008). The focus of this measurement program describe in this report is on size segregated particulate air pollution. These data provide the input to receptor models that may permit the mitigation of these impacts by identification and quantitative apportionment of the particle sources. The aim of this report was to provide an overview of the measurements of concentrations and composition of particulate air pollution in two size fractions across the participating countries. The suburban Nilore, Islamabad was the studied site in Pakistan (Philip et al 2008). During 2008, Colbeck et al studied indoor air quality at rural and urban sites in Pakistan. Measurements were made of particulate mass (PM10, PM2.5 and PM1) and bio aerosols in different micro environments. PM10 concentrations of upto 8,555 μg/m3 were observed inside the kitchens where biofuels were used as energy source. Cleaning and smoking were identified as major sources of indoor particulate pollution and during these activities, concentrations of more than more than 2,000 μg/m3 were recorded in the living room. (Colebeck et al 2008)

In their reviews on state of ambient air quality and indoor air quality, Colbeck et al (2010) reported a substantial rise in the types and number of emission sources of various air pollutants. The Government had taken positive steps toward air quality management in the form of the Pakistan Clean Air Program and also establishing a small number of continuous monitoring stations in the country. Lead (Pb) was observed to be many times higher than the World Health Organization air quality guidelines. A significant economic burden of annual cost of 1% of GDP on Pakistan is estimated due to air pollution in the country. Study analyzes the existing information on levels of indoor air pollution in Pakistan and suggests suitable intervention methods. High levels of particulate matter and carbon monoxide have been reported. Addressing women and children’s indoor health and comfort-related issues generates commercial, environmental, and socioeconomic benefits. In Pakistan, 94% of rural and 58% of urban households depend on biomass fuel. At a rural site, the average indoor/ outdoor ratios for PM10, PM2.5, and PM1, in kitchens using biomass fuels were 3.80, 4.36, and 4.11, respectively. Cooking, cleaning and smoking were identified as principal contributors to the high indoor levels of particulate matter (Colbeck et al 2010).

Majid et al (2012) reported a study on “Ambient air quality with emphasis on roadside junctions in metropolitan cities of Pakistan and its potential health effects,” indicating that available information on air quality in Pakistan is insufficient and unorganized, however it highlights the alarming situation in metropolitan cities of Pakistan. The studies which have been carried out reveal that the current levels of PM, heavy metals are many times higher than the WHO air quality guidelines. Pakistan still has to develop a basic air quality management system and there is an urgent need to develop comprehensive air quality standards and the corresponding legislation (Majid et al 2012). In 2012, Khwaja et al carried out a study to look into and discuss the socioeconomic situation of South Asia, the existing situation of air pollution in the countries of the region, its resulting health impacts on the population and the responses, if any, of national governments to combat air pollution. With the projected increase in industrial activity, exponential growth in number of vehicles and population, the contribution of each South Asian country to the regional air pollution will increase over time. Among others the paper made recommendation, including a legally binding agreement for South Asia (LBA-SA), for strengthening the framework for air pollution reduction at regional and national levels in South Asia (Khwaja et al 2012). Studies to evaluate the adverse effects of ambient pollutants on commonly grown food crops are still limited, especially in Asian countries like Pakistan. Study carried out by Adrees et al showed that wheat, mung bean and peas cultivars showed similar sensitivity to Ozone with respect to foliar injury, growth, yield, photosynthesis and grain quality under ambient ozone (Adrees et al 2015) Khwaja et al have reported a number of studies on indoor/outdoor air contamination with mercury vapors in and around dental sites (teaching institutions, hospitals & private clinics) in some main cities of Pakistan (Khwaja et al 2016; 2014).
An earlier study indicated exceptionally high mercury levels in air (indoor and outdoor) at 11 of the 34 dental sites which were visited in five main cities of Pakistan. 88% of the sites indicated indoor mercury levels higher than the USA EPA permissible level of 300 ng/m3 (Khwaja & Abbasi 2014). The findings were also compared to the data of dental sites of 16 other countries and was concluded that the indoor mercury levels at all the sites exceeded the safe limit (Khwaja et al 2014). According to another study conducted at 38 dental teaching institutions in 12 cities of Pakistan, the consensus was that the BDS curriculum does not effectively provide dental professionals with adequate knowledge and training on the human health issues of mercury amalgam and its waste disposal. 64% dental professionals interviewed during a survey supported a ban on mercury dental amalgam use to safeguard public health, especially children and for the protection of the environment (Khwaja et al. 2016)

Ambient air quality evaluation for a comparative study in China and Pakistan have been carried out and reported by Niaz & Zhou et al in 2015. The results obtained were the first to compare air quality of two countries at different stations and highlight the possibility of reducing air pollution by comparing conditions in the cities of the two neighboring countries.

NO2, SO2, and CO concentrations were measured in the ambient air at various stations in Dalian (China) and Faisalabad (Pakistan) for one year between January to December, 2013. The annual average NO2, SO2, and CO concentrations were below the permissible limits in Dalian; however, the measured values of the same were considerably higher in Faisalabad. A recent study at sustainable development policy institute by Imran and Khaver aims to assess and explore the current situation of air pollution in the country and to thoroughly deconstruct laws and regulations that deal with the subject. Furthermore, the study would analyze the role, gaps and hindrances of multiple institutions that are responsible for tackling air pollution. The study is near completion and would soon be available to stakeholders and interested researchers (Khalid & Khaver 2019).

In Pakistan, Air quality management is handled at the national, provincial and local (district & city) levels. The Pakistan Environmental Protection Act 1997 is the umbrella legislation that also covers general provision on air quality (Khwaja et al 2019). In 2010 Pakistan environmental protection agency (Pak.-EPA) drafted national environmental quality standards (NEQSs) for ambient air, approved by Pakistan environmental protection council (PEPC) and notified (S.R.O 1062(1)/2010 dated November 26, 2010 (Pakistan Gazette 2010).

References


Challenges to sustainable development financing in Pakistan

The partial implementation of Millennium Development Goals (MDGs) has educated us regarding its consequences on delivery system especially when there is a lack of understanding about appropriate financing possibilities. According to UN Conference on Trade and Development, this came at a time when global FDI flows slid by 13% which was the third consecutive annual decline. With this backdrop, the evolution of development finance brings with it new instruments such as blended finance while previously it was dominated by the traditional Development Assistance Committee (DAC) donors. Consequently, the state of financing of the SDGs is particularly problematic in developing countries like Pakistan. Thus, Pakistan has the opportunity to learn from the United Nation’s Secretary General’s Roadmap for financing the 2030 Agenda for Sustainable Development.

SDPI is conducting a study titled: ‘Challenges of Financing Sustainable Development in Pakistan’ to guide the federal and provincial planning departments on this subject. The study aims to explore all the possible avenues of financing for Pakistan’s national development agenda. Moreover, even with all the required resources successful implementation of Sustainable Development Goals (SDGs) is not guaranteed, given institutional and governance related gaps, missing capacity for domestic resource mobilization and limited options for external finance.

According to the study, even if global public resources are scaled up in a financially sustainable way, they are simply insufficient to fully finance the SDGs and realize Agenda 2030 and the Paris Agreement. The gross world product is estimated to be at US $85.91 trillion while global gross private sector financial assets are estimated at over US $200 trillion. Even though there have been notable increases in sustainable investments, the investment gap required to finance SDGs in developing countries remains sizeable at US $2.5 to $3 trillion per year. - By Mobeen Ali
Digitalizing Social Protection Systems

Mahnoor Arshad

Social protection is commonly understood as a transformation of public policies and programmes into something concrete to reduce inequalities in the society and protect the poor against livelihood risks. Devereux, and Sabates-Wheeler (2004) describe social protection as:

All public and private initiatives that provide income or consumption transfers to the poor, protect the vulnerable against livelihood risks and enhance the social status and rights of the marginalized with the overall objective of reducing the socioeconomic vulnerability of the poor, and marginalized groups.

As mandated in the Constitution of Pakistan, social protection is the obligation of the state in order to provide basic human rights. The social protection landscape in Pakistan is very fragmented. In Pakistan, there are about 154 social protection programs out of which around 120 are in the Punjab alone covering risks such as healthcare, old age, survivors, disability, sickness, child or family benefits, unemployment, housing, labour market risks, poverty and social exclusion. Despite resource constraints, the government tries to target as many people as possible even when the programmes are not universal.¹

The federal government remains constrained to invest in social protection schemes due to their ongoing fiscal crunch. Despite difficulties to raise resources for targeted pro-poor subsidies, the government has tried to expand interventions through the Ehsaas program under the newly-formed Poverty Alleviation and Social Safety Division (2019). These interventions also complement the cash transfers, education and health services at provincial level, while active labour market programmes such as skill and vocational trainings have also been expanded by both federal and provincial governments. A key policy action under this objective of Ehsaas is the ‘creation of a one-window social protection operation to assist beneficiaries of social protection and to reduce duplication and abuse’

Various stakeholders have contributed or are willing to contribute to the social protection regime in various ways. Development partners have supported the government by contributing to social protection services. An example of this is the GIZ Social Protection – Social Health Protection Program (SP-SHP)² which supports the national, provincial, and district level governments in designing and implementing social protection schemes and increasing access to them through single window service models. The private sector too has had a significant role to play, including social enterprises³. The business model more commonly known as Corporate Social Responsibility (CSR)⁴ helps the private sector to actively maintain this role, examples being Engro⁵ and Hashoo Foundation⁶ among others⁷.

Despite a great number of social protection programmes and involvement of the government, COVID-19 pandemic has rendered all these ineffective and inadequate as countless families below the poverty line can be seen struggling for basic necessities due to the country-wide lockdown. The Government of Pakistan has taken many steps in this firefighting mode

¹ The issues and gaps in Pakistan’s social protection ecosystem can be identified in past work done by SDPI. For more information, please see:
https://www.slideshare.net/vahmed/social-protection-in-pakistan
and
and
https://www.slideshare.net/vahmed/social-protection-in-balochistan
and
https://www.amazon.com/Pakistans-Agenda-Economic-Reforms-Vaqr/dp/0199406057
² Details of the program may be viewed at: https://www.giz.de/en/worldwide/52804.html
³ For more information on social enterprises, please see: https://www.unescap.org/resources/issue-paper-social-enterprise-development-pakistan-way-forward
⁴ For more information on CSR in Pakistan, please see: https://imsiences.edu.pk/files/journals/Vol%209%20issue%201/Paper%204.pdf
⁵ Please see: https://www.engro.com/social-impact/#csr
⁶ Please see: http://www.hashoogroup.com/hashoo-foundation
⁷ For more examples of CSR activities in Pakistan, please see:
https://www.transparenthands.org/csr-activities-in-pakistan/
including the announcement of a corona relief fund, formation of a Corona Relief Tigers Force, and a relief package as well. However, these steps too will not be as effective as one would hope because the real struggle is in identifying and locating potential beneficiaries, given that crowds gathering for ration collection is not possible due to the virus. Therefore, it is imperative that the government seizes the opportunity and makes use of the momentum created by the COVID-19 pandemic to make progress in establishing a collectively financed and digitalized social protection regime.

Studying trends of COVID-19 in other affected countries, the end of April in Pakistan can potentially see cases and fatalities increasing and simultaneously witness crippled supply chains for the food and pharmaceutical sector. It is in this scenario that digital, IT, and e-commerce tools will be quite pertinent to sustain the country and aid offices part of the social protection regime. In order to better prepare for the future, SDPI will try, with support of the government, to build capacity of various social protection institutions to integrate their databases and conduct capacity building sessions for them on how to best use databases and big data to better target beneficiaries through an effective social protection regime.

References

