VALUE OF SOCIAL DISTANCING DURING COVID-19 CRISIS: THE CASE OF SINDH

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The COVID-19 is very easily transmitted from person to person through droplets and contaminated surfaces. China controlled the spread through mass testing and early interventions like strict measures of social distancing. Few other Asian countries are also taking proactive measures to limit the spread like Taiwan and Singapore. Many countries, including European countries like Italy, couldn't take early interventions including the social distancing and epidemic became uncontrollable. Now numerous countries, including India have taken very strict measures.

As compared to other regions of the country, Sindh took an early response but still in terms of social distancing it took long to take steps and the public adaptability toward the policies of social distancing has been slow. There were four reported cases on 27 February 2020 and this number reached 394 on 23 March 2020. The growth rate of cases in Sindh is: 22% from 27 Feb to 7 March, 60%8 to 18 March and 13.8% from 19 March to 23 March 2020.

Karachi is a very populated city and had around a 15 million population in the 2017 census. Social distancing is not easy to implement in this mega city. There are many workers in Karachi who come from surrounding cities and there are frequent movements not only within Sindh but also interprovincial travels. According to Johns Hopkins Center of Health Security:

"Social Distancing is a public health practice that aims to prevent sick people from coming in close contact with healthy people in order to reduce opportunities for disease transmission. It can include large scale measures like canceling group events or closing public spaces, as well as individual decisions such as avoid crowds."

SINDH GOVERNMENT'S STANCE ON SOCIAL DISTANCING:

The Sindh Government has been very proactive in terms of implementing policies regarding social distancing after 15 March 2020. This delay was mainly due to an increase in their capability in terms of mass testing. They imported testing kits and prepared many quarantine centers, which diverted the attention from social distancing. However, a preliminary analysis of social distancing in Sindh is

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presented in Table 1. Other provinces can learn lessons from this and even the Sindh Government can take further action considering the importance of social distancing in the coming days. The actions taken by the provincial government include:

- (1) Closure of schools and educational institutions
- (2) Closure of inter-city transport
- (3) Closure of inter-province land transport,
- (4) Closure of weddings, cinemas, shopping malls, mosques and other gathering places
- (5) Closure of Karachi and Sukker Airport

With the help of these indicators we have developed an index of social distancing from very low to high. Along with movement of this indexing scale we calculate the mean and standard deviations, finally this lead us to create three scenarios, i.e., with low social distancing policies, medium social distancing policies and high social distancing policies. This is presented in the following table, where zero shows no policy and one shows a respective policy implemented.

Date	Sch_closure	Inter_city_Bus	Inter_Prov_Bus	Cinema/wedding s/public	Khi_Skr_Airport	Index	Scale
20-02-27	1	0	0	0	0	1	Low
20-02-28	1	0	0	0	0	1	Low
20-02-29	1	0	0	0	0	1	Low
20-03-01	1	0	0	0	0	1	Low
20-03-02	1	0	0	0	0	1	Low
20-03-03	0	0	0	0	0	0	V.Low
20-03-04	0	0	0	0	0	0	V.Low
20-03-05	0	0	0	0	0	0	V.Low
20-03-06	0	0	0	0	0	0	V.Low
20-03-07	0	0	0	0	0	0	V.Low
20-03-08	0	0	0	0	0	0	V.Low
20-03-09	0	0	0	0	0	0	V.Low

20-03-10	0	0	0	0	0	0	V.Low
20-03-11	0	0	0	0	0	0	V.Low
20-03-12	1	0	0	0	0	1	Low
20-03-13	1	0	0	0	0	1	Low
20-03-14	1	0	0	0	0	1	Low
20-03-15	1	0	0	1	0	2	Medium
20-03-16	1	0	0	1	0	2	Medium
20-03-17	1	0	0	1	0	2	Medium
20-03-18	1	0	0	1	0	2	Medium
20-03-19	1	1	1	1	0	4	High
20-03-20	1	1	1	1	0	4	High
20-03-21	1	1	1	1	0	4	High
20-03-22	1	1	1	1	0	4	High
20-03-23	1	1	1	1	1	5	V.High

Source: Various sources including print media and Government notifications

Based on the above scale we created three scenarios, which are presented in the graph below. The first blue line is representing the actual scenario; the other three are hypothetical scenarios with (1) low social distancing polices, (2) medium social distancing policies and (3) high social distancing policies. If the Sindh Government had opted for the high social distancing policy from March 1 2020 there would have been a difference of almost 36 percentage points. The actual and three hypothetical scenarios presented in the graph below are conservative estimates and the expected impact will probably be greater.

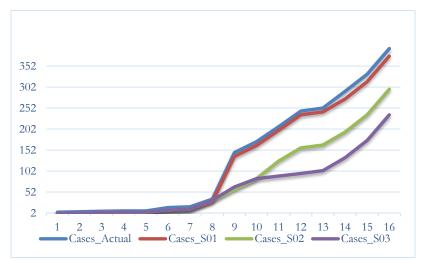


Figure 12: Response of COVID-19 with Actual and 3 Scenarios of Social Distancing

² Please note that this graph is based on simple assumptions. It is meant to illustrate the importance of policy measure to slowdown the spread of COVID-19.