Annex to the 2022 Asia Pacific SDG Partnership Report
Building Forward Together - Towards an inclusive and resilient Asia and the Pacific

To determine if changes on primary net enrolment is statistically significant, paired student's t-Test was done. As a result, on average, the difference between 2019 and 2020 primary net enrolment rate is statistically significantly greater than zero at 5% confidence level. This means that 2019 primary net enrolment rate is on average higher compared to 2020.

Table 1. t-Test: Paired Two Sample for Means

	2019	2020
Mean	94.29	92.87
Variance	52.36	64.10
Observations	18	18
Pearson Correlation	0.94	
Hypothesized Mean Difference	0	
df	17	
t Stat	2.25	
P(T<=t) one-tail	0.02	
t Critical one-tail	1.74	
P(T<=t) two-tail	0.04	
t Critical two-tail	2.11	

To determine a linear relationship of economic and COVID-19 related variables, a series of pear R correlation tests were conducted. The values in Table 2 below are the correlation coefficient that ranges from -1.0 to 1.0. Values closer to -1.0 denote strong negative correlation while closer to 1.0 denote strong positive correlation. Cells highlighted in yellow are correlations that are statistically significant at the 5% level. The bullet points below summarize the result of the series of correlation tests:

- Countries who were performing better in 2019 in terms of GDP growth rate are positively correlated with GDP growth rate of 2020.
- The variable country international tourist receipts is negatively correlated with GDP growth rate of 2020. This means that the higher the international receipts in 2019, the lower the GDP growth rate in 2020.
- Country cumulative cases of COVID-19 is negatively correlated with GDP growth rate of 2020.
- Country social protection coverage (both with at least 1 social protection and coverage on vulnerable populations) is positively correlated with persons fully vaccinated per 100.

Table 2. Correlation coefficients for economic and COVID-19 related variables

Variables	GDP growth rate - 2019	GDP growth rate - 2020	GDP growth rate forecast - 2020	GDP growth rate difference of actual and forecast - 2020	Industry (including construction), value added (% of GDP) - 2019	Industry (including construction), value added (% of GDP) - 2020	Manufacturing, value added (% of GDP) - 2019	Manufacturing, value added (% of GDP) - 2020	Agriculture, forestry, and fishing, value added (% of GDP) - 2019	Agriculture, forestry, and fishing, value added (% of GDP) - 2020	International tourism, receipts (% of total exports) - 2019	COVID-19 Cases - cumulative total per 100000 population	COVID-19 Deaths - cumulative total per 100000 population	COVID-19 death rate	Persons fully vaccinated against COVID-19 per 100	Social protection coverage (% of population)	Gross enrolment - 2019	Gross enrolment - 2020	Individuals using the Internet (% of population) - 2019	Individuals using the Internet (% of population) - 2020	Vulnerable persons covered by social assistance - 2019	Vulnerable persons covered by social assistance - 2020
GDP growth rate - 2019	1.00																					
GDP growth rate - 2020	0.34	1.00																				
GDP growth rate forecast - 2020	0.79	0.19	1.00																			
GDP growth rate difference of actual and forecast - 2020	0.03	0.93	-0.19	1.00																		
Industry (including construction), value added (% of GDP) - 2019	0.21	0.25	0.33	0.13	1.00																	
Industry (including construction), value added (% of GDP) - 2020	0.21	0.19	0.37	0.05	0.80	1.00																
Manufacturing, value added (% of GDP) - 2019	0.13	0.22	0.27	0.12	0.57	0.65	1.00															
Manufacturing, value added (% of GDP) - 2020	0.03	0.08	0.20	0.00	0.50	0.68	0.81	1.00														
Agriculture, forestry, and fishing, value added (% of GDP) - 2019	0.26	0.22	0.32	0.10	0.05	0.03	0.02	-0.08	1.00													
Agriculture, forestry, and fishing, value added (% of GDP) - 2020	0.33	0.15	0.45	-0.02	0.10	0.30	0.17	0.09	0.79	1.00												
International tourism, receipts (% of total exports) - 2019	0.07	-0.51	0.11	-0.55	-0.15	-0.01	-0.06	-0.03	0.04	0.16	1.00											
COVID-19 Cases - cumulative total per 100000 population	0.01	-0.38	0.07	-0.41	0.13	0.23	0.08	0.19	-0.23	-0.11	0.44	1.00										
COVID-19 Deaths - cumulative total per 100000 population	-0.05	-0.21	-0.03	-0.20	0.15	0.25	0.16	0.25	-0.14	-0.06	0.22	0.81	1.00									
COVID-19 death rate	0.14	0.24	0.19	0.16	0.24	0.23	0.43	0.32	0.27	0.25	-0.17	0.00	0.27	1.00								
Persons fully vacinnated against COVID-19 per 100	-0.26	-0.10	-0.16	-0.04	0.19	0.24	0.21	0.26	-0.47	-0.30	0.05	0.04	-0.16	-0.24	1.00							
Social protection coverage (% of population)	-0.17	-0.09	-0.25	0.00	0.04	0.14	0.21	0.26	-0.50	-0.40	-0.07	0.36	0.34	-0.11	0.35	1.00						
Gross enrolment - 2019	0.11	0.08	0.32	-0.05	0.12	0.13	0.29	0.26	0.11	0.13	-0.17	-0.12	-0.08	0.34	0.01	-0.10	1.00					
Gross enrolment - 2020	0.10	0.03	0.34	-0.10	0.11	0.14	0.31	0.29	0.02	0.08	-0.12	-0.06	-0.07	0.32	0.06	-0.02	0.97	1.00				
Individuals using the Internet (% of population) - 2019	-0.24	-0.05	-0.40	0.10	0.18	0.10	0.05	0.00	-0.31	-0.32	-0.03	0.13	0.10	-0.20	0.35	0.31	-0.26	-0.24	1.00			
Individuals using the Internet (% of population) - 2020	-0.17	-0.16	-0.17	-0.09	0.29	0.28	0.28	0.29	-0.29	-0.29	-0.04	0.26	0.26	0.07	0.26	0.19	0.02	0.04	0.45	1.00		
Vulnerable persons covered by social assistance - 2019	-0.16	-0.04	-0.22	0.04	-0.06	-0.13	0.00	-0.02	-0.54	-0.49	-0.20	0.26	0.22	-0.11	0.28	0.82	-0.03	0.04	0.23	0.09	1.00	
Vulnerable persons covered by social assistance - 2020	-0.13	-0.06	-0.20	0.02	-0.06	-0.14	-0.01	-0.02	-0.52	-0.48	-0.18	0.23	0.19	-0.15	0.31	0.86	-0.08	-0.01	0.24	0.09	0.97	1.00