***Data Collection***

The exact documentation of the sources used to find specific data is described here. All related data can be found in ChinaCOVIDRawData.xlsx.

# China (WHO Data) [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  ChinaWHO!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 9th, 2023, by the cumulative percentage from Jun 10th, 2021. No vaccine percentages are available from Jun 1st, 2021, so the earliest vaccine coverage was chosen from the database. No vaccine percentages are available from Feb 13th, 2023, so the latest vaccine coverage was chosen from the database. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set country as “China”. Set Metric to “People vaccinated”. Select “Relative to Population”.  Jun 10th, 2021: 43.62%  Feb 9th, 2023: 91.89%  Vaccine coverage: 91.89% - 43.62% = 48.27% |
| Vaccine coverage: Full course  ChinaWHO!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 9th, 2023, by the cumulative percentage from Aug 12th, 2021. No vaccine percentages are available from Jun 1st, 2021, so the earliest vaccine coverage was chosen from the database. No vaccine percentages are available from Feb 13th, 2023, so the latest vaccine coverage was chosen from the database.  ***Methodology***  Set country as “China”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Aug 12th, 2021: 54.50%  Feb 9th, 2023: 89.54%  Vaccine coverage: 89.54% - 54.40% = 35.04% |
| Infection-derived immunity  ChinaWHO!B4:H4 | <https://www.nature.com/articles/d41586-023-01872-7>  Although infection-derived immunity was calculated using cumulative cases in all other countries, because of the confusion on the cumulative number of cases in China an alternate source was used. The article writes that approximately 85% of China’s population was infected in December 2022, which is corroborated by other news outlets. |
| Prevalence  ChinaWHO!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence = 94,489/1,409,778,724 = 0.00006702 |
| Population size  ChinaWHO!B6:H6 | <http://www.stats.gov.cn/sj/ndsj/2021/indexeh.htm>  The population sizes for each age group was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2021 (2-17: Population by Age and Gender (2020)).  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age.  <18: 77,883,888 + 90,244,056 + 85,255,994 + 72,684,140\*3/5 = 296994422  18-29: 72,684,140\*2/5 + 74,941,675 + 91,847,332 = 195862663  30-39: 124,145,190 + 99012932 = 223,158,122  40-49: 92,955,330 + 114224887 = 207,180,217  50-59: 121,164,296 + 101,400,786 = 222,565,082  60+: 73,382,938 + 74,005,560 + 49,590,036 + 31,238,849 + 35,800,835 = 264,018,218  Total population: 1,409,778,724 |
| Cumulative Cases  ChinaWHO!B8 | <https://covid19.who.int/region/wpro/country/cn>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Select “Cumulative”. Select “Daily”. Hover over the desired date and choose the number for confirmed cases.  May 1st, 2021: 103,649  Feb 19th, 2023: 98,904,475  Cumulative cases: 98,904,475 - 103,649 = 98,800,826 |
| Weekly Cases  ChinaWHO!B9 | <https://covid19.who.int/region/wpro/country/cn>  The weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Select “Daily Change”. Select “Weekly”. Hover over Feb 13th, 2023, and choose the number for confirmed cases.  Weekly cases: 94,489 |
| China Inbounding Travellers (2019)  ChinaWHO!B10 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the inbound travelers to China was approximately 145,307,800 in 2019 (page 13). |
| China Estimated Inbounding Travellers (Feb 2023)  ChinaWHO!B11 | <https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/what-to-expect-from-chinas-travel-rebound#/>  Because of the lack of information on inbounding travelers to China in February 2023, an estimate from McKinsey and Company was employed, predicting that China’s tourism recovery would follow a trajectory similar to that of Hong Kong. Using the graph, roughly two million travelers will visit China in February 2023. |

# China (Surveillance Data) [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Prevalence  ChinaSurveillance!B5:H5 | <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10184382/>  In a study by Fu *et al.*, out of an online survey filled out buy 2,391 Chinese participants, an estimated 0.1% self-reported as being actively infectious between February 2nd to February 4th. |

# Japan [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  Japan!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set country as “Japan”. Set Metric to “People vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 10.87%  Feb 13th, 2023: 84.43%  Vaccine coverage: 84.43% - 10.87% = 73.56% |
| Vaccine coverage: Full course  Japan!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021.  ***Methodology***  Set country as “Japan”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 3.47%  Feb 13th, 2023: 83.34%  Vaccine coverage: 83.34% - 3.47% = 79.87% |
| Infection-derived immunity  Japan!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity = 32,479,468/124,862,000 = 0.2601229 |
| Prevalence  Japan!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence = 141,082/124,862,000 = 0.0011300 |
| Population size  Japan!B6:H6 | <https://www.stat.go.jp/english/data/jinsui/tsuki/index.html>  The population sizes for each age group were extracted from the Statistics Bureau of Japan Monthly Report.  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age.  <18: 4,223,000 + 4,929,000 + 5297000 + 5,516,000\*3/5 = 17,758,600  18-29: 5,516,000\*2/5 + 6,266,000 + 6,420,000 = 14,892,400  30-39: 6,434,000 + 7,189,000 = 13,623,000  40-49: 7,915,000 + 9,415,000 = 17,330,000  50-59: 9,474,000 + 8,112,000 = 17,586,000  60+: 7,462,000 + 7,484,000 + 9,245,000 + 7,111,000 + 5,738,000 + 3,969,000 + 2,008,000 + 567,000 + 88,000 = 43,672,000  Total population: 124,862,000 |
| Inbounding Travellers (China to Japan) (Feb 2023)  Japan!B8, Japan!B9 | <https://www.tourism.jp/en/tourism-database/stats/inbound/>  Japan’s Tourism department reports the number of tourists from China who visited Japan monthly. 36,200 visitors came in Feb 2023 (1293 per day) |
| Outbounding Travellers (Japan to China) (2018)  Japan!B10 | <http://www.stats.gov.cn/sj/ndsj/2019/indexeh.htm>  The number of travelers from Japan to China was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2019 (17-13: Number of Oversea Visitor Arrivals by Country/Region).  Outbound Travelers: 2,691,400 |
| Outbounding Travellers (Japan to China) (2023)  Japan!B11, Japan!B12 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Japan to China.  Feb 2023 = 2,691,400\*2,000,000/145,307,800 = 37044  Daily = 37044/28 = 1323 |
| Length of Stay (China to Japan) (2019)  Japan!B13 | <https://statistics.jnto.go.jp/en/graph/#graph--average--length--of--stay>  Data was derived from Japan’s official Tourism Department. Select “China” for Country/Area.  Length of Stay: 5.8 days |
| Length of Stay (Japan to China) (2019)  Japan!B154 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay for inbound tourists to China was around 9.2 days (page 49). |
| Cumulative Cases  Japan!B15 | <https://covid19.who.int/region/wpro/country/jp>  The number of cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Select “Cumulative”. Select “Daily”. Hover over the desired data and choose the number for confirmed cases.  May 1st, 2021: 597,225  Feb 19th, 2023: 33,076,693  Cumulative Cases: 33,076,693 - 597,225 = 32,479,468 |
| Weekly Cases  Japan!B16, Japan!B17 | <https://covid19.who.int/region/wpro/country/jp>  The weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Select “Daily Change”. Select “Weekly”. Hover over Feb 13th, 2023, and choose the number for confirmed cases.  Weekly cases: 141,082  Daily Incidence = 141,082/7 = 20,155 |

# South Korea [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  SouthKorea!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set country as “South Korea”. Set Metric to “People vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 12.14%  Feb 13th, 2023: 86.41%  Vaccine coverage: 86.41% - 12.14% = 74.27% |
| Vaccine coverage: Full course  SouthKorea!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021.  ***Methodology***  Set country as “South Korea”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 4.27%  Feb 13th, 2023: 85.61%  Vaccine coverage: 85.61% - 4.27% = 81.34% |
| Infection-derived immunity  SouthKorea!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity = 30,306,339/51,815,797 = 0.5848861 |
| Prevalence  SouthKorea!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence = 79,372/51,815,797 = 0.0015318 |
| Population size  SouthKorea!B6:H6 | <https://www.populationpyramid.net/republic-of-korea/2022/>  The population sizes for each age group was extracted from PopulationPyramid.net, which uses information from the United Nations.  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age.  <18: 1,553,522 + 2,137,592 + 2,304,825 + 2,300,682\*3/5 = 7,376,348  18-29: 2,300,682\*2/5 + 3,083,300 + 3624178 = 7,627,751  30-39: 3,405,340 + 3,518,709 = 6,924,049  40-49: 4,033,819 + 4,057,848 = 8,091,667  50-59: 4,489,610 + 4,091,813 = 8,581,423  60+: 4,151,390 + 3,092,536 + 2,152,607 + 1,592,179 + 1,238,961 + 657,693 + 260,012 + 60,335 + 8,846 = 13,214,559  Total population: 51,815,797 |
| Inbounding Travellers (China to South Korea) (Dec 2022)  SouthKorea!B8, SouthKorea!B9 | <https://www.koreatimes.co.kr/www/culture/2023/04/141_348163.html>  The Korea Times reports that according to the official Korean Tourism Organization, 45,900 Chinese travelers visited in Feb 2023 (1,639 per day). |
| Outbounding Travellers (South Korea to China) (2018)  SouthKorea!B10 | <http://www.stats.gov.cn/sj/ndsj/2019/indexeh.htm>  The number of travelers from South Korea to China was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2019 (17-13: Number of Oversea Visitor Arrivals by Country/Region).  Outbound Travelers: 4,193,500 |
| Outbounding Travellers (South Korea to China) (2023)  SouthKorea!B11, SouthKorea!B12 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from South Korea to China.  Feb 2023 = 4,193,500\*2,000,000/145,307,800 = 57,719  Daily = 57,719/28 = 2061.4 |
| Length of Stay (China to South Korea) (2019)  SouthKorea!B13 | <https://kto.visitkorea.or.kr/file/download/bd/a7cbdfa5-ac62-11ea-8847-e3a3d34471d5.pdf.kto>  Chinese travelers stay in South Korea for an estimated 7.2 days (page 12). |
| Length of Stay (South Korea to China) (2019)  SouthKorea!B14 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay for inbound tourists to China was around 9.2 days (page 49). |
| Cumulative Cases  SouthKorea!B15 | <https://covid19.who.int/region/wpro/country/kr>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Select “Cumulative”. Select “Daily”. Hover over the desired data and choose the number of confirmed cases.  May 1st, 2021: 123,232  Feb 19th, 2023: 30,429,571  Cumulative Cases: 30,429,571 - 123,232 = 30,306,339 |
| Weekly Cases  SouthKorea!B16, SouthKorea!B17 | <https://covid19.who.int/region/wpro/country/kr>  The number of weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Select “Daily Change”. Select “Weekly”. Hover over Feb 13th, 2023, and choose the number for confirmed cases.  Weekly Cases: 79,372  Daily Incidence: 79,372/7 = 11,339 |

# Singapore [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  Singapore!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Jan 30th, 2023, by the cumulative percentage from Jun 1st, 2021. No vaccine percentages are available from Feb 13th, 2023, so the latest vaccine coverage was chosen from the database. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set country as “Singapore”. Set Metric to “People vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 40.44%  Jan 30th, 2023: 91.55%  Vaccine coverage: 91.55% - 40.44% = 51.11% |
| Vaccine coverage: Full course  Singapore!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Jan 30th, 2023, by the cumulative percentage from Jun 1st, 2021. No vaccine percentages are available from Feb 13th, 2023, so the latest vaccine coverage was chosen from the database.  ***Methodology***  Set country as “Singapore”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 31.26%  Jan 30th, 2023: 90.84%  Vaccine coverage: 90.84% - 31.26% = 59.58% |
| Infection-derived immunity  Singapore!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity = 2,160,827/4,073,239 = 0.5304935 |
| Prevalence  Singapore!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence = 3,849/4,073,239 = 0.0009449 |
| Population size  Singapore!B6:H6 | <https://tablebuilder.singstat.gov.sg/table/TS/M810011>  The population sizes for each age group were extracted from the official Singapore census data.  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age.  <18: 178,085 + 201,360 + 202,379 + 206,749\*3/5 = 705,873  18-29: 206,749\*2/5 + 233,303 + 280,082 = 596,085  30-39: 317,153 + 290,981 = 608,134  40-49: 299,871 + 304,317 = 604,188  50-59: 292,984 + 299,835 = 592,819  60+: 288,007 + 678,133 = 966,140  Total population: 4,073,239 |
| Inbounding Travellers (China to Singapore) (Feb 2023)  Singapore!B8, Singapore!B9 | <https://www.singstat.gov.sg/publications/reference/ebook/industry/tourism>  Singapore’s Tourism department reports the number of tourists from China who visited Singapore monthly. 35,312 visitors from mainland China came in Feb 2023 (1,261 per day) |
| Outbounding Travellers (Singapore to China) (2018)  Singapore!B10 | <http://www.stats.gov.cn/sj/ndsj/2019/indexeh.htm>  The number of travelers from Singapore to China was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2019 (17-13: Number of Oversea Visitor Arrivals by Country/Region).  Outbound Travelers: 978,400 |
| Outbounding Travellers (Singapore to China) (2023)  Singapore!B11, Singapore!B12 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Singapore to China.  Feb 2023 = 978,400\*2,000,000/145,307,800 = 13,467  Daily = 13,467/28 = 481 |
| Length of Stay (China to Singapore) (2022)  Singapore!B13 | <https://www.scmp.com/news/asia/southeast-asia/article/3207085/singapore-expects-billions-more-tourism-dollars-china-boost>  Executives from Singapore’s Tourism Board report that the average Chinese traveler stayed in Singapore for 4.81 days. |
| Length of Stay (Singapore to China) (2019)  Singapore!B14 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay for inbound tourists to China was around 9.2 days (page 49). |
| Cumulative Cases  Singapore!B15 | <https://covid19.who.int/region/wpro/country/sg>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Select “Cumulative”. Select “Daily”. Hover over the desired data and choose the number for confirmed cases.  May 1st, 2021: 61,179  Feb 19th, 2023: 2,222,006  Cumulative Cases: 2,222,006 - 61,179 = 2,160,827 |
| Weekly Cases  Singapore!B16, Singapore!B17 | <https://covid19.who.int/region/wpro/country/sg>  The weekly cases was extracted from the official WHO database for the week of Feb 20th to Feb 27th. This week was used instead of the week of Feb 13th to 19th because the latter was very significantly lower than the other weekly case numbers, and potentially an outlier.  ***Methodology***  Select “Daily Change”. Select “Weekly”. Hover over Feb 20th, 2023, and choose the number for confirmed cases.  Weekly cases: 3,849  Daily Incidence: 3,849/7 = 550 |

# England [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  England!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set country as “England”. Set Metric to “People vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 58.51%  Feb 13th, 2023: 80.29%  Vaccine coverage: 80.29% - 58.21% = 22.08% |
| Vaccine coverage: Full course  England!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021.  ***Methodology***  Set country as “England”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 39.17%  Feb 13th, 2023: 75.92%  Vaccine coverage: 75.92% - 39.17% = 36.75% |
| Infection-derived immunity  England!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 16,650,385/56,536,419 = 0.2945072 |
| Prevalence  England!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 22,380/56,536,419 = 0.0003959 |
| Population size  England!B6:H6 | <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationandhouseholdestimatesenglandandwales/census2021>  The population sizes for each age group was extracted from official England census data.  ***Methodology***  <18: 579,315 + 601,274 + 614,109 + 623,873 + 639,646 + 658,513 + 653,208 + 658,120 + 675,503 + 694,918 + 696,488 + 688,076 + 683,067 + 689,261 + 663,078 + 649,499 + 648,066 + 645,642 = 11,761,656  18-29: 637,270 + 641,579 + 650,705 + 661,796 + 684,929 + 695,509 + 714,474 + 705,555 + 720,077 + 744,015 + 749,401 + 775,860 = 8,381,170  30-39: 789,926 + 791,601 + 788,320 + 799,021 + 781,498 + 776,514 + 774,632 + 750,999 + 751,814 + 748,949 = 7,753,274  40-49: 757,542 + 760,845 + 729,833 + 679,655 + 667,273 + 681,401 + 695,685 + 704,152 + 731,536 + 759,044 = 7,166,966  50-59: 786,831 + 766,990 + 783,664 + 781,179 + 785,653 + 781,563 + 782,568 + 770,902 + 751,858 + 733,101 = 7,724,309  60+: 704,980 + 674,965 + 655,837 + 636,312 + 608,797 + 583,874 + 559,535 + 558,458 + 546,304 + 528,480 + 528,807 + 533,882 + 543,415 + 570,305 + 613,713 + 464,281 + 444,154 + 435,404 + 395,427 + 345,640 + 301,313 + 305,184 + 293,030 + 274,127 + 249,035 + 223,864 + 200,094 + 173,198 + 152,119 + 135,074 + 509,436 = 13,749,044  Total population: 56,536,419 |
| Inbounding Travellers (China to England) (Q4 2022)  England!B8, England!B9 | <https://www.oxfordeconomics.com/resource/china-travel-recovery-timings-are-clear-but-magnitude-remains-uncertain-for-2023/>  <https://www.visitbritain.org/markets/china>  In 2018, 686,433 travelers from China visited England. This was calculated by subtracting the total number of visitors to the UK to the visitors to other locations (883,073 - 171,650 - 17,440 - 1,310 - 6,240 = 686,433).  The recovery rate of Chinese travelers is expected to be about 48%, or that 686,433\*0.48 = 329,488 travelers will come from China to England in 2023 (903 per day). |
| Outbounding Travellers (England to China) (2019)  England!B10 | <https://www.visitscotland.org/research-insights/about-our-visitors/international/china>  An estimated 598,000 individuals from England traveled to China in 2019. The number of travelers from England to China was estimated by subtracting the number of travelers from the UK by the number of travelers from Scotland (646,000 - 48,000 = 598,000). |
| Outbounding Travellers (England to China) (2023)  England!B11, England!B12 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from England to China.  Feb 2023: 598,000\*2,000,000/145,307,800 = 8,231  Daily: 8,231/28 = 294 |
| Length of Stay (China to England) (2018)  England!B13 | <https://www.visitbritain.org/markets/china>  The average length of stay of Chinese travelers in England can be estimated using the average length of stay of Chinese travelers in the UK. The average length of stay is around 16.33 days. |
| Length of Stay (England to China) (2019)  England!B14 | <https://www.visitscotland.org/research-insights/about-our-visitors/international/china>  The average length of stay of English travelers in China can be estimated using the average length of stay of all UK travelers in China. The average length of stay is around 24.6 days. |
| Cumulative Cases  England!B15 | <https://coronavirus.data.gov.uk/details/cases?areaType=nation&areaName=England>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  On the graph named “Cases by specimen date”, click the “Total” tab. Hover over the desired date and choose the number of cases.  May 1st, 2021: 3,948,017  Feb 19th, 2023: 20,598,402  Cumulative Cases: 20,598,402 - 3,948,017 = 16,650,385 |
| Weekly Cases  England!B16, England!B17 | <https://coronavirus.data.gov.uk/details/cases?areaType=nation&areaName=England>  The weekly cases was extracted from the official UK COVID database for the week of Feb 13th to Feb 19th.  ***Methodology***  On the graph named “Cases by specimen date”, click the “Total” tab. Hover over the desired date and choose the number of cases.  Feb 13th, 2023: 20,576,022  Feb 19th, 2023: 20,598,402  Weekly Cases: 20,598,402 - 20,576,022 = 22,380  Daily Incidence: 22,380/7 = 3,197 |

# Scotland [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  Scotland!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. No vaccine percentages are available from Feb 13th, 2023, so the latest vaccine coverage was chosen from the database. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set country as “Scotland”. Set Metric to “People vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 60.12%  Sep 11th, 2022: 83.23%  Vaccine coverage: 83.23% - 60.12% = 23.11% |
| Vaccine coverage: Full course  Scotland!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. No vaccine percentages are available from Feb 13th, 2023, so the latest vaccine coverage was chosen from the database.  ***Methodology***  Set country as “Scotland”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 38.53%  Sep 11th, 2022: 78.41%  Vaccine coverage: 78.41% - 38.53% = 39.88% |
| Infection-derived immunity  Scotland!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 1,927,983/5,479,900 = 0.3518281 |
| Prevalence  Scotland!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 1,655/5,479,900 = 0.0003020 |
| Population size  Scotland!B6:H6 | <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>  The population sizes for each age group was extracted from official Scotland census data.  ***Methodology***  <18: 46,782 + 49,017 + 51,478 + 53,317 + 54,843 + 57,070 + 57,945 + 58,262 + 59,490 + 60,960 + 62,868 + 59,950 + 61,557 + 61,334 + 58,857 + 57,792 + 57,280 + 56,179 = 1,024,981  18-29: 55,074 + 57,305 + 61,314 + 63,526 + 66,277 + 69,034 + 71,827 + 71,242 + 71,264 + 73,491 + 75,198 + 79,523 = 815,075  30-39: 79,853 + 76,958 + 76,395 + 76,227 + 73,900 + 73,404 + 72,855 + 70,423 + 71,179 + 72,113 = 743,307  40-49: 71,460 + 69,923 + 67,428 + 62,504 + 61,236 + 64,443 + 64,670 + 65,770 + 69,572 + 73,843 = 670,849  50-59: 76,442 + 75,420 + 78,255 + 79,663 + 80,011 + 79,389 + 81,987 + 80,973 + 80,622 + 78,439 = 791,201  60+: 76,225 + 73,417 + 72,636 + 70,250 + 68,098 + 65,670 + 62,371 + 61,188 + 59,360 + 56,835 + 56,692 + 56,433 + 57,056 + 58,119 + 61,854 + 45,663 + 42,249 + 42,149 + 39,250 + 34,988 + 31,336 + 30,894 + 29,041 + 27,044 + 24,360 + 21,934 + 19,692 + 16,983 + 14,476 + 12,903 + 45,321 = 1,434,487  Total population: 5,479,900 |
| Inbounding Travellers (China to Scotland) (2019)  Scotland!B8, Scotland!B9 | <https://www.oxfordeconomics.com/resource/china-travel-recovery-timings-are-clear-but-magnitude-remains-uncertain-for-2023/>  <https://www.visitbritain.org/markets/china>  In 2018, 171,650 travelers from China visited Scotland. The recovery rate of Chinese travelers is expected to be about 48%, meaning 171,650\*0.48 = 82,392 travelers will come from China to Scotland in 2023 (226 per day). |
| Outbounding Travellers (Scotland to China) (2019)  Scotland!B10 | <https://www.visitscotland.org/research-insights/about-our-visitors/international/china>  In 2019, an approximate 48,000 people from Scotland visited China. |
| Outbounding Travellers (Scotland to China) (2023)  Scotland!B11, Scotland!B12 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Scotland to China.  Feb 2023: 48,000\*2,000,000/145,307,800 = 661  Daily: 661/28 = 23.6 |
| Length of Stay (China to Scotland) (2019)  Scotland!B13 | <https://www.visitscotland.org/research-insights/about-our-visitors/international/china>  In 2019, the average stay of Chinese visitors in Scotland was 11.9 days. |
| Length of Stay (Scotland to China) (2019)  Scotland!B14 | <https://www.visitscotland.org/research-insights/about-our-visitors/international/china>  The average length of stay of Scottish travelers in China can be estimated using the average length of stay of all UK travelers in China. The average length of stay is around 24.6 days. |
| Cumulative Cases  Scotland!B15 | <https://scotland.shinyapps.io/phs-respiratory-covid-19/>  The number of cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated from Feb 19th, 2023 to May 1st, 2021.  ***Methodology***  The data for the Reported COVID-19 Cases was downloaded, then summed from May 1st, 2021 to Feb 19th, 2023.  Cumulative Cases: 1,927,983 |
| Weekly Cases  Scotland!B16, Scotland!B17 | <https://scotland.shinyapps.io/phs-respiratory-covid-19/>  The number of weekly cases was extracted from the official Scotland COVID database for the week of Feb 13th to Feb 19th.  ***Methodology***  The data for the Reported COVID-19 Cases was downloaded, then summed from Feb 13th, 2023 to Feb 19th, 2023.  Weekly Cases: 1,655  Daily Incidence: 1,655/7 = 236 |

# France [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  France!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set the country as “France”. Set Metric to “People vaccinated”. Select “Relative to Population”. Select “Cumulative” for the interval.  Jun 1st, 2021: 39.59%  Feb 13th, 2023: 80.61%  Vaccine coverage: 80.61% - 39.59% = 41.02% |
| Vaccine coverage: Full course  France!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021.  ***Methodology***  Set the country as “France”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 17.18%  Feb 13th, 2023: 78.41%  Vaccine coverage: 78.41% - 17.18% = 61.23% |
| Infection-derived immunity  France!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 33,277,148/67,063,703 = 0.4962021 |
| Prevalence  France!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 23,862/67,063,703 = 0.0003558 |
| Population size  France!B6:H6 | <https://www.insee.fr/en/statistiques/2382597?sommaire=2382613>  ***Methodology***  *Notes*  <18: 706,382 + 716,159 + 729,139 + 749,142 + 770,897 + 795,049 + 801,336 + 818,973 + 824,266 + 844,412 + 836,610 + 841,774 + 833,484 + 847,250 + 828,874 + 828,224 + 825,535 + 824,243 = 14,421,749  18-29: 830,859 + 832,135 + 778,595 + 767,419 + 738,255 + 741,493 + 731,720 + 709,814 + 710,229 + 747,365 + 762,740 + 783,278 = 9,133,902  30-39: 793,756 + 805,709 + 809,462 + 824,388 + 823,154 + 817,616 + 809,113 + 860,183 + 868,514 + 876,362 = 8,288,257  40-49: 830,619 + 812,560 + 815,529 + 795,012 + 818,506 + 859,407 + 905,508 + 925,828 + 921,091 + 900,389 = 8,584,449  50-59: 888,940 + 878,137 + 872,944 + 891,913 + 893,796 + 901,416 + 889,289 + 857,860 + 858,184 + 852,627 = 8,785,106  60+: 845,836 + 827,046 + 818,270 + 809,103 + 799,407 + 795,066 + 776,073 + 784,280 + 760,998 + 783,527 + 766,434 + 759,622 + 739,203 + 692,884 + 518,955 + 502,516 + 483,835 + 443,448 + 389,310 + 397,453 + 408,011 + 390,052 + 372,609 + 362,050 + 336,284 + 325,338 + 293,641 + 280,250 + 250,255 + 226,053 + 186,015 + 160,562 + 132,403 + 110,466 + 89,330 + 69,801 + 53,201 + 39,728 +29,030 + 20,035 + 21,860 = 17,850,240  Total population: 67,063,703 |
| Inbounding Travellers (China to France) (Dec 2022)  France!B8, France!B9 | <https://www.entreprises.gouv.fr/files/files/directions_services/etudes-et-statistiques/Chiffres_cles/Tourisme/2019-04-key-facts-on-tourism-2018.pdf>  <https://www.connexionfrance.com/article/French-news/Tourism-in-France-The-2022-trends-and-outlook-for-2023>  In 2018, of the 68.1 million travelers to France, 2.1 million were from China, for a proportion of 2.1/68.1 = 0.030837.  The World Travel and Tourism Council reported that France welcomed 34.5 million tourists in 2022. An estimated 34,500,000\*0.030837 = 1,063,877 tourists are from China (2915 per day). |
| Outbounding Travellers (France to China) (2018)  France!B10 | <http://www.stats.gov.cn/sj/ndsj/2019/indexeh.htm>  The number of travelers from France to China was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2019 (17-13: Number of Oversea Visitor Arrivals by Country/Region).  Outbound Travelers: 499,600 |
| Outbounding Travellers (France to China) (2023)  France!B11, France!B12, France!B13 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from France to China.  Feb 2023 = 499,600\*2,000,000/145,307,800 = 6,876  Daily = 6,876/28 = 245.6 |
| Length of Stay (China to France) (2021)  France!B14 | <https://www.statista.com/statistics/1246755/length-of-stay-overseas-tourists-in-france/>  The average length of stay for inbound tourists to France in 2018 was around 6.68 days. |
| Length of Stay (France to China) (2019)  France!B15 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay for inbound tourists to China was around 9.2 days (page 49). |
| Cumulative Cases  France!B16 | <https://covid19.who.int/region/euro/country/fr>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Select “Cumulative”. Select “Daily”. Hover over the desired data and choose the number for confirmed cases.  May 1st, 2021: 5,205,996  Feb 19th, 2023: 38,483,144  Cumulative Cases: 38,483,144 - 5,205,996 = 33,277,148 |
| Weekly Cases  France!B17, France!B18 | <https://covid19.who.int/region/euro/country/fr>  The weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Select “Daily Change”. Select “Weekly”. Hover over Feb 13th, 2023, and choose the number for confirmed cases.  Weekly Cases: 23,862  Daily Incidence: 23,862/7 = 3,409 |

# Germany [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  Germany!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set the country as “Germany”. Set Metric to “People vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 44.46%  Feb 13th, 2023: 77.81%  Vaccine coverage: 77.81% - 44.46% = 33.35% |
| Vaccine coverage: Full course  Germany!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021.  ***Methodology***  Set the country as “Germany”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 18.94%  Feb 13th, 2023: 76.24%  Vaccine coverage: 76.24% - 18.94% = 57.3% |
| Infection-derived immunity  Germany!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 34,612,784/83,237,124 = 0.4158335 |
| Prevalence  Germany!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 97,597/83,237,124 = 0.0011725 |
| Population size  Germany!B6:H6 | <https://www.destatis.de/EN/Themes/Society-Environment/Population/Current-Population/Tables/lrbev01ga.html>  ***Methodology***  *Notes*  The population is presented in percentages. The percentages are assumed to be equally distributed across each age in the chart. For example, the 20-39 age group is split evenly between 20-29 and 30-39.  <18: 83,237,124\*16.7% = 13,900,600  18-29: 83,237,124\*(18.5% - 16.7% + 24.4%/2) = 7,075,156  30-39: 83,237,124\*(24.4%/2) = 10,154,929  40-49: 83,237,124\*(27.7%/2) = 11,528,342  50-59: 83,237,124\*(27.7%/2) = 11,528,342  60+: 83,237,124\*(22.0% + 7.3%) = 24,388,477  Total population: 83,237,124 |
| Inbounding Travellers (China to Germany) (Dec 2022)  Germany!B8, Germany!B9 | <https://www.destatis.de/DE/Themen/Branchen-Unternehmen/Gastgewerbe-Tourismus/Publikationen/Downloads-Tourismus/statistischer-bericht-monatserhebung-tourismus-2060710231025.html>  Germany’s Statistics Department reports that 22,063 people visited Germany in Feb 2023 from China (788 per day). |
| Outbounding Travellers (Germany to China) (2018)  Germany!B10 | <http://www.stats.gov.cn/sj/ndsj/2019/indexeh.htm>  The number of travelers from Germany to China was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2019 (17-13: Number of Oversea Visitor Arrivals by Country/Region).  Outbound Travelers: 643,700 |
| Outbounding Travellers (Germany to China) (2023)  Germany!B11, Germany!B12, Germany!B13 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Germany to China.  Feb 2023 = 643,700\*2,000,000/145,307,800 = 8,860  Daily = 8,860/28 = 316.4 |
| Length of Stay (China to Germany) (2021)  Germany!B14 | <https://www.statista.com/statistics/572316/trip-duration-german-tourists/>  The average trip in Germany was 12.7 days long in 2022. |
| Length of Stay (Germany to China) (2019)  Germany!B15 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay for inbound tourists to China was around 9.2 days (page 49). |
| Cumulative Cases  Germany!B16 | <https://covid19.who.int/region/wpro/country/kr>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Select “Cumulative”. Select “Daily”. Hover over the desired data and choose the number for confirmed cases.  May 1st, 2021: 3,402,021  Feb 19th, 2023: 38,014,805  Cumulative Cases: 38,014,805 - 3,402,021 = 34,612,784 |
| Weekly Cases  Germany!B17, Germany!B18 | The number of weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Select “Daily Change”. Select “Weekly”. Hover over Feb 13th, 2023, and choose the number for confirmed cases.  Weekly Cases: 97,597  Daily Incidence: 97,597/7 = 13,942 |

# Italy [As of June 18th, 2023]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  Italy!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set the country as “Italy”. Set Metric to “People vaccinated”. Select “Relative to Population”. Set Interval to “Cumulative”  Jun 1st, 2021: 40.96%  Feb 13th, 2023: 86.23%  Vaccine coverage: 86.23% - 40.96% = 45.27% |
| Vaccine coverage: Full course  Italy!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021.  ***Methodology***  Set the country as “Italy”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 1st, 2021: 21.13%  Feb 13th, 2023: 81.24%  Vaccine coverage: 81.24% - 21.13% = 60.01% |
| Infection-derived immunity  Italy!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 21,533,330/58,870,750 = 0.3657730 |
| Prevalence  Italy!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 4,164/58,870,750 = 0.0000707 |
| Population size  Italy!B6:H6 | <https://www.populationpyramid.net/italy/2023/>  The population sizes for each age group were extracted from PopulationPyramid.net, which uses information from the United Nations.  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age. Females and males for each age group were added together.  <18: 1,062,733 + 1,005,264 + 1,227,328 + 1,160,645 + 1,402,208 + 1,323,106 + (1,470,662 + 1,384,622)\*3/5 = 8,894,454  18-29: (1,470,662 + 1,384,622)\*2/5 + 1,520,070 + 1,402,357 + 1,561,592 + 1,438,384 = 7,064,517  30-39: 1,642,757 + 1,576,820 + 1,686,485 + 1,660,975 = 6,567,037  40-49: 1,857,515 + 1,852,236 + 2,201,241 + 2,221,798 = 8,132,790  50-59: 2,355,735 + 2,409,334 + 2,364,241 + 2,455,115 = 9,584,425  60+: 2,041,653 + 2,185,911 + 1,733,590 + 1,912,112 + 1,537,518 + 1,753,972 + 1,281,472 + 1,552,547 + 953,762 + 1,306,348 + 561,194 + 919,755 + 216,148 + 470,606 + 43,050 + 136,006 + 3,894 + 17,989 = 18,627,527  Total population: 58,870,750 |
| Inbounding Travellers (China to Italy) (Feb 2023)  Italy!B8, Italy!B9 | <https://stats.oecd.org/index.aspx?DataSetCode=TOURISM_INBOUND>  The OECD documents that in 2021, of the 26,903,217 overnight visitors to Italy, 204,874 were from China, or roughly a proportion of 204,874/26,903,217 = 0.00762  The Bank of Italy reports that in February 2023, 4,751,000 people visited Italy. The number of Chinese travelers can be estimated to be 4,751,000\*0.00762 = 36,180 (1,292 per day) |
| Outbounding Travellers (Italy to China) (2018)  Italy!B10 | <http://www.stats.gov.cn/sj/ndsj/2019/indexeh.htm>  The number of travelers from Italy to China was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2019 (17-13: Number of Oversea Visitor Arrivals by Country/Region).  Outbound Travelers: 278,100 |
| Outbounding Travellers (Italy to China) (2023)  Italy!B11, Italy!B12, | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Italy to China.  Feb 2023 = 278,100\*2,000,000/145,307,800 = 3,828  Daily = 3,828/28 = 136.7 |
| Length of Stay (China to Italy) (2021)  Italy!B13 | <https://www.statista.com/statistics/901296/number-of-nights-spent-by-chinese-tourists-in-accommodations-in-italy/>  Chinese tourists spent an approximate 5.36 days in Italy in 2019. |
| Length of Stay (Italy to China) (2019)  Italy!B14 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay Italian visitors to China was around 7.2 days (page 96). |
| Cumulative Cases  Italy!B15 | <https://covid19.who.int/region/euro/country/it>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Select “Cumulative”. Select “Daily”. Hover over the desired data and choose the number for confirmed cases.  May 1st, 2021: 4,022,653  Feb 19th, 2023: 25,555,983  Cumulative Cases: 25,555,983 - 4,022,653 = 21,533,330 |
| Weekly Cases  Italy!B16, Italy!B17 | <https://covid19.who.int/region/euro/country/it>  The weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Select “Daily Change”. Select “Weekly”. Hover over Feb 13th, 2023, and choose the number for confirmed cases.  Weekly Cases: 29,146  Daily Incidence: 29,146/7 = 4,164 |

# Vietnam [As of April 27th, 2024]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  Vietnam!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Mar 30th, 2023, by the cumulative percentage from May 31st, 2021. Since data for February was not available, the cumulative vaccine coverage from March 30th was used to estimate cumulative coverage in February. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set the country as “Vietnam”. Set Metric to “People vaccinated”. Select “Relative to Population”. Set Interval to “Cumulative”  May 31st, 2021: 1.09%  Mar 30th, 2023: 91.89%  Vaccine coverage: 91.89% - 1.09% = 90.80% |
| Vaccine coverage: Full course  Vietnam!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Mar 30th, 2023, by the cumulative percentage from May 31st, 2021. Since data for February was not available, the cumulative vaccine coverage from March 30th was used to estimate cumulative coverage in February.  ***Methodology***  Set the country as “Vietnam”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  May 31st, 2021: 0.03%  Mar 30th, 2023: 87.45%  Vaccine coverage: 87.45% - 0.03% = 87.42% |
| Infection-derived immunity  Vietnam!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 11,523,844/98,858,940 = 0.1165686 |
| Prevalence  Vietnam!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 155/98,858,940 = 0.0000016 |
| Population size  Vietnam!B6:H6 | <https://www.populationpyramid.net/viet-nam/2023/>  The population sizes for each age group were extracted from PopulationPyramid.net, which uses information from the United Nations.  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age. Females and males for each age group were added together.  <18: 3,800,725 + 3,426,579 + 3,939,676 + 3,544,335 + 3,792,741 + 3,440,038 + (3,601,545 + 3,343,866)\*3/5 = 26,111,341  18-29: (3,601,545 + 3,343,866)\*2/5 + 3,483,030 + 3,329,338 + 3,767,549 + 3,670,243 = 17,028,324  30-39: 4,110,748 + 4,140,825 + 3,894,075 + 4,005,840 = 16,151,488  40-49: 3,770,910 + 3,772,579 + 3,480,568 + 3,444,405 = 14,468,462  50-59: 2,873,005 + 3,014,649 + 2382350 + 2,695,203 = 10,965,207  60+: 2,160,900 + 2,536,101 + 1,727,415 + 2,125,586 + 1,094,758 + 1,505,724 + 515,328 + 855,221 + 279,136 + 568,114 + 130,912 + 368,094 + 39,201 + 170,898 + 5,304 + 44,066 + 366 + 6,994 = 14,134,118  Total population: 98,858,940 |
| Inbounding Travellers (China to Vietnam) (2019)  Vietnam!B8 | <https://www.gso.gov.vn/en/statistical-data/>  The Vietnam General Statistics Office reports that in 2019, a total of 5,806,425 visitors from China came to Vietnam. |
| Inbounding Travellers (China to Vietnam) (2023)  Vietnam!B9, Vietnam!B10 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Vietnam to China.  Feb 2023 = 5,806,425\*2,000,000/145,307,800 = 79,919  Daily = 79,919/28 = 2,854.25 |
| Outbounding Travellers (Vietnam to China) (2018)  Vietnam!B11 | <https://chinapower.csis.org/tourism/>  The number of travelers from Vietnam to China, sourced from the UN World Tourism Organization, was found to be 7,587,932. |
| Outbounding Travellers (Vietnam to China) (2023)  Vietnam!B12, Vietnam!B13, | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Vietnam to China.  Feb 2023 = 7,587,932\*2,000,000/145,307,800 = 104,439  Daily = 104,439/28 = 3,730 |
| Length of Stay (China to Vietnam) (2019)  Vietnam!B14 | <https://gitnux.org/vietnam-tourist-statistics/>  On average for all countries, inbound tourists to Vietnam stayed for a total of 9 days. |
| Length of Stay (Vietnam to China) (2019)  Vietnam!B15 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay for inbound tourists to China was around 9.2 days (page 49). |
| Cumulative Cases  Vietnam!B16 | <https://data.who.int/dashboards/covid19/cases?n=c>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 2nd, 2021.  ***Methodology***  Using the WHO COVID Dashboard datasets (<https://data.who.int/dashboards/covid19/data>), the data from the “Daily COVID-19 cases and deaths by date reported to WHO” section was downloaded. The cumulative infection rate from the desired dates were taken.  May 2nd, 2021: 2,962  Feb 19th, 2023: 11,526,806  Cumulative Cases: 11,526,806 - 2,962 = 21,533,330 |
| Weekly Cases  Vietnam!B17, Vietnam!B18 | <https://data.who.int/dashboards/covid19/cases?n=c>  The weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Using the WHO COVID Dashboard datasets (<https://data.who.int/dashboards/covid19/data>), the data from the “Daily COVID-19 cases and deaths by date reported to WHO” section was downloaded. The weekly infection rate from Feb 19th was taken.  Weekly Cases: 155  Daily Incidence: 155/7 = 22 |

# Thailand [As of April 27th, 2024]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  Thailand!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  <https://cdn.who.int/media/docs/default-source/searo/thailand/2023_03_01_tha-sitrep-258-covid-19.pdf?sfvrsn=908c5aa3_1>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 18th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  To find the vaccine coverage from Jun 1st, 2021, Set the country as “Thailand”. Set Metric to “People vaccinated”. Select “Relative to Population”. Set Interval to “Cumulative”.  Jun 1st, 2021: 3.61%  To find the vaccine coverage of at least one dose from Feb 18th, 2023, the “Vaccination 1st dose” from the WHO Thailand Weekly  Situation Update No. 258 was used.  Feb 18th, 2023: 57,222,551/71,801,270 = 79.70%  Vaccine coverage: 79.70% - 3.61% = 76.09% |
| Vaccine coverage: Full course  Thailand!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  <https://cdn.who.int/media/docs/default-source/searo/thailand/2023_03_01_tha-sitrep-258-covid-19.pdf?sfvrsn=908c5aa3_1>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 18th, 2023, by the cumulative percentage from Jun 1st, 2021.  ***Methodology***  To find the vaccine coverage from Jun 1st, 2021, Set the country as “Thailand”. Set Metric to “People vaccinated”. Select “Relative to Population”. Set Interval to “Cumulative”.  Jun 1st, 2021: 1.62%  To find the vaccine coverage of a full course from Feb 18th, 2023, the “Vaccination 2nd dose” from the WHO Thailand Weekly  Situation Update No. 258 was used.  Feb 18th, 2023: 53,714,481/71,801,270 = 74.81%  Vaccine coverage: 74.81% - 1.62% = 73.19% |
| Infection-derived immunity  Thailand!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 4,658,847/71,801,270 = 0.0648853 |
| Prevalence  Thailand!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 203/71,801,270 = 0.0000028 |
| Population size  Thailand!B6:H6 | <https://www.populationpyramid.net/thailand/2023/>  The population sizes for each age group were extracted from PopulationPyramid.net, which uses information from the United Nations.  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age. Females and males for each age group were added together.  <18: 1,665,517 + 1,568,184 + 1,882,698 + 1,773,939 + 2,079,924 + 1,961,662 + (2,099,160 + 1,987,038)\*3/5 = 13,383,643  18-29: (2,099,160 + 1,987,038)\*2/5 + 2,265,443 + 2,140,173 + 2576843 + 2,486,849 = 11,103,787  30-39: 2,542,502 + 2,505,809 + 2,505,669 + 2,561,269 = 10,115,249  40-49: 2,582,543 + 2,630,477 + 2,398,247 + 2,593,212 = 10,204,479  50-59: 2,470,013 + 2,818,827 + 2,459,977 + 2,840,176 = 10,588,993  60+: 2,301,586 + 2,645,448 + 1,856,338 + 2,180,064 + 1,325,244 + 1,615,870 + 825,321 + 1,071,139 + 524,183 + 747,845 + 294,819 + 482,216 + 124,413 + 248,425 + 37,481 + 90,673 + 7,790 + 26,264 = 16,405,119  Total population: 71,801,270 |
| Inbounding Travellers (China to Thailand) (Feb 2023)  Thailand!B8, Thailand!B9 | <https://www.mots.go.th/news/category/706>  Using data from the Thailand Ministry of Tourism & Sports, 155,656 travelers from China came to Thailand in Feb 2023.  Daily: 155,656/28 = 5,559 |
| Outbounding Travellers (Thailand to China) (2018)  Thailand!B10 | <http://www.stats.gov.cn/sj/ndsj/2019/indexeh.htm>  The number of travelers from Thailand to China was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2019 (17-13: Number of Oversea Visitor Arrivals by Country/Region).  Outbound Travelers: 833,400 |
| Outbounding Travellers (Thailand to China) (2023)  Thailand!B11, Thailand!B12 | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Thailand to China.  Feb 2023 = 833,400\*2,000,000/145,307,800 = 11,471  Daily = 11,471/28 = 410 |
| Length of Stay (China to Thailand) (2022)  Thailand!B13 | <https://trail.bananabackpacks.com/thailand-tourism-stats/>  Using information derived from the Thailand Ministry of Tourism & Sports, the average Chinese traveler stays in Thailand for 7.80 days. |
| Length of Stay (Thailand to China) (2019)  Thailand!B14 | <https://www.mots.go.th/news/category/616>  Using information derived from the Thailand Ministry of Tourism & Sports, the average traveler from Thailand stays in China for 6.34 days. |
| Cumulative Cases  Thailand!B15 | <https://data.who.int/dashboards/covid19/cases?n=c>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Using the WHO COVID Dashboard datasets (<https://data.who.int/dashboards/covid19/data>), the data from the “Daily COVID-19 cases and deaths by date reported to WHO” section was downloaded. The cumulative infection rate from the desired dates were taken.  May 2nd, 2021: 68,984  Feb 19th, 2023: 4,727,831  Cumulative Cases: 4,727,831 - 68,984 = 4,658,847 |
| Weekly Cases  Thailand!B16, Thailand!B17 | <https://data.who.int/dashboards/covid19/cases?n=c>  The weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Using the WHO COVID Dashboard datasets (<https://data.who.int/dashboards/covid19/data>), the data from the “Daily COVID-19 cases and deaths by date reported to WHO” section was downloaded. The weekly infection rate from Feb 19th was taken.  Weekly Cases: 203  Daily Incidence: 203/7 = 29 |

# Hong Kong [As of April 27th, 2024]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  HongKong!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set the country as “Hong Kong”. Set Metric to “People vaccinated”. Select “Relative to Population”. Set Interval to “Cumulative”  Jun 1st, 2021: 18.69%  Feb 13th, 2023: 92.31%  Vaccine coverage: 92.31% - 18.69% = 73.62% |
| Vaccine coverage: Full course  HongKong!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 2nd, 2021.  ***Methodology***  Set the country as “Hong Kong”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 2nd, 2021: 13.99%  Feb 13th, 2023: 90.74%  Vaccine coverage: 90.74% - 13.99% = 76.75% |
| Infection-derived immunity  HongKong!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 2,870,505/7,503,100 = 0.3825759 |
| Prevalence  HongKong!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 1,263/7,503,100 = 0.0001683 |
| Population size  HongKong!B6:H6 | <https://www.censtatd.gov.hk/en/web_table.html?id=110-01001>  The population sizes for each age group were extracted from Hong Kong census data.  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age. The data for both sexes combined was used.  <18: 192,900 + 266,300 + 301,700 + (295,300)\*3/5 = 938,080  18-29: (295,300)\*2/5 + 300,700 + 420,300 = 839,120  30-39: 506,200 + 563,700 = 1,069,900  40-49: 602,500 + 562,200 = 1,164,700  50-59: 586,300 + 581,500 = 1,167,800  60+: 642,700 + 578,400 + 430,500 + 270,900 + 155,700 + 245,300 = 2,323,500  Total population: 7,503,100 |
| Inbounding Travellers (China to Hong Kong) (Feb 2023)  HongKong!B8, HongKong!B9 | <https://partnernet.hktb.com/filemanager/LatestStatistics/261/Tourism%20Statistics%2002%202023.pdf>  Using data from the Hong Kong Tourism Board, 1,109,885 travelers from mainland China visited Hong Kong in Feb 2023.  Daily: 1,109,885/28 = 39,639 |
| Outbounding Travellers (Hong Kong to China) (2018)  HongKong!B10 | <https://www.travelchinaguide.com/tourism/2018statistics/>  Using data sourced from the Ministry of Culture and Tourism of People's Republic of China, 79,370,000 travelers from Hong Kong visited China in 2018. |
| Outbounding Travellers (Hong Kong to China) (2023)  HongKong!B11, HongKong!B12, | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Hong Kong to China.  Feb 2023 = 79,370,000\*2,000,000/145,307,800 = 1,092,440  Daily = 1,092,440/28 = 39,016 |
| Length of Stay (China to Hong Kong) (2023)  HongKong!B13 | <https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3248322/hong-kong-welcomed-34-million-visitors-2023-figure-december-reached-65-pre-pandemic-levels>  According to information from the Hong Kong Tourism Board, the average length of stay for all visitors to Hong Kong was 3.6 days. |
| Length of Stay (Hong Kong to China) (2019)  HongKong!B14 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay for inbound tourists to China was around 9.2 days (page 49). |
| Cumulative Cases  HongKong!B15 | <https://www.worldometers.info/coronavirus/country/china-hong-kong-sar/>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Using the data from the “Total Coronavirus Cases in China, Hong Kong SAR” chart, the cumulative infection rate for each of the desired dates was taken by hovering over the respective times.  May 1st, 2021: 11,783  Feb 19th, 2023: 2,882,288  Cumulative Cases: 2,882,288 - 11,783 = 2,870,505 |
| Weekly Cases  HongKong!B16, HongKong!B17 | <https://covid19.sph.hku.hk/dashboard>  The weekly cases was extracted for the week of Feb 13th to Feb 19th.  ***Methodology***  Using data from the Hong Kong COVID-19 Dashboard, the number of new infections per day over the week of Feb 13th to Feb 19th was calculated by summing the number of new daily infections for each date in this period, extracted from the “Epidemic curve by confirmation date and stratified by case classifications” graph.  Weekly Cases: 167 + 197 + 216 + 196 + 164 + 181 + 142 = 1,263  Daily Incidence: 1,263/7 = 180 |

# Philippines [As of April 27th, 2024]

| Data | Link and Extraction Methods |
| --- | --- |
| Vaccine coverage: At least one dose  Philippines!B2:H2 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took at least one dose of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021. The maximum of the percentage from this calculation and the calculation from **Vaccine coverage: Full course** was used.  ***Methodology***  Set the country as “Philippines”. Set Metric to “People vaccinated”. Select “Relative to Population”. Set Interval to “Cumulative”  Jun 2nd, 2021: 3.61%  Feb 16th, 2023: 67.90%  Vaccine coverage: 67.90% - 3.61% = 64.29% |
| Vaccine coverage: Full course  Philippines!B3:H3 | <https://ourworldindata.org/covid-vaccinations>  The coverage for individuals who took the full course of the vaccine during the 20.5-month period of vaccine durability was calculated by subtracting the cumulative percentage from Feb 13th, 2023, by the cumulative percentage from Jun 1st, 2021.  ***Methodology***  Set the country as “Philippines”. Set Metric to “People fully vaccinated”. Select “Relative to Population”.  Jun 2nd, 2021: 1.16%  Feb 16th, 2023: 64.05%  Vaccine coverage: 64.05% - 1.16% = 62.89% |
| Infection-derived immunity  Italy!B4:H4 | Infection-derived immunity was calculated by dividing the number of cumulative cases over the last 21.5 months, over the duration of the durability of immunity, by the total population.  Infection-derived immunity: 3,020,412/117,337,355 = 0.0257413 |
| Prevalence  Italy!B5:H5 | Prevalence was calculated by dividing the weekly cases by the total population.  Prevalence: 914/117,337,355 = 0.0000078 |
| Population size  Philippines!B6:H6 | <https://www.populationpyramid.net/philippines/2023/>  The population sizes for each age group were extracted from PopulationPyramid.net, which uses information from the United Nations.  ***Methodology***  *Notes*  The age group of 15-19 was separated across the <18 and 18-29 groups by assuming an equal number of individuals for each age. Females and males for each age group were added together.  <18: 6,250,159 + 5,831,509 + 6,030,452 + 5,619,976 + 5,942,778 + 5,533,348 + (5,705,806 + 5,330,969)\*3/5 = 41,830,287  18-29: (5,705,806 + 5,330,969)\*2/5 + 5366354 + 5067569 + 4994781 + 4830884 = 24,674,298  30-39: 4,580,602 + 4,439,358 + 4,024,953 + 3,853,203 = 16,898,116  40-49: 3,656,951 + 3,484,429 + 3,209,050 + 3,084,942 = 13,435,372  50-59: 2,803,828 + 2,727,707 + 2,309,688 + 2,335,023 = 10,176,246  60+: 1,811,703 + 1,934,405 + 1,330,259 + 1,509,897 + 847,288 + 1,036,574 + 437,538 + 605,368 + 205,183 + 332,148 + 69,568 + 139795 + 14,677 + 38,641 + 2,041 + 6,958 + 188 + 805 = 10,323,036  Total population: 117,337,355 |
| Inbounding Travellers (China to Italy) (Feb 2023)  Philippines!B8, Philippines!B9 | <http://www.tourism.gov.ph/files/2024/tourism_demand/03/03-08/Arrivals/2023%20-%20Visitor%20Arrivals%20by%20Country%20of%20Residence%20and%20Monthly%20Ranking%20(revised)%20(2%20files%20merged).pdf>  Using data from the Republic of the Philippines Department of Tourism, 14,904 travelers from China visited the Philippines in Feb 2023.  Daily = 14,904/28 = 532 |
| Outbounding Travellers (Philippines to China) (2018)  Philippines!B10 | <http://www.stats.gov.cn/sj/ndsj/2019/indexeh.htm>  The number of travelers from Philippines to China was extracted from the China National Bureau of Statistics through the China Statistical Yearbook 2019 (17-13: Number of Oversea Visitor Arrivals by Country/Region).  Outbound Travelers: 1,205,000 |
| Outbounding Travellers (Philippines to China) (2023)  Philippines!B11, Philippines!B12, | Using the McKinsey estimate, we can scale the estimated number of outbound travelers from Philippines to China.  Feb 2023 = 1,205,000\*2,000,000/145,307,800 = 3,828  Daily = 3,828/28 = 137 |
| Length of Stay (China to Philippines) (2017)  Philippines!B13 | <http://www.tourism.gov.ph/industry_performance_oct_2017.aspx>  The Republic of the Philippines Department of Tourism reports that the average length of stay of visitors to the Philippines is 7.87 days. |
| Length of Stay (Philippines to China) (2019)  Philippines!B14 | <https://www.wta-web.org/wp-content/uploads/2022/03/China-Inbound-Tourism-Development-Report.pdf>  The World Tourism Alliance estimated the average length of stay for inbound tourists to China was around 9.2 days (page 49). |
| Cumulative Cases  Philippines!B15 | <https://data.who.int/dashboards/covid19/cases?n=c>  The cumulative cases during the 21.5-month period of infection-derived immunity durability was calculated by subtracting the cumulative number of cases from Feb 19th, 2023, by the cumulative number of cases from May 1st, 2021.  ***Methodology***  Using the WHO COVID Dashboard datasets (<https://data.who.int/dashboards/covid19/data>), the data from the “Daily COVID-19 cases and deaths by date reported to WHO” section was downloaded. The cumulative infection rate from the desired dates were taken.  May 2nd, 2021: 1,054,970  Feb 19th, 2023: 4,075,382  Cumulative Cases: 4,075,382 - 1,054,970 = 3,020,412 |
| Weekly Cases  Philippines!B16, Philippines!B17 | <https://data.who.int/dashboards/covid19/cases?n=c>  The weekly cases was extracted from the official WHO database for the week of Feb 13th to Feb 19th.  ***Methodology***  Using the WHO COVID Dashboard datasets (<https://data.who.int/dashboards/covid19/data>), the data from the “Daily COVID-19 cases and deaths by date reported to WHO” section was downloaded. The weekly infection rate from Feb 19th was taken.  Weekly Cases: 914  Daily Incidence: 914/7 = 131 |