Title
How Effective Are Quarantine Measures During the Pandemic Period on The Number of Cases: An Analysis on Countries with Different Income Levels

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Abstract
On the last days of 2019, China warned the WHO about an unspecified virus, now called COVID-19. One month later on January 30, 2020, the WHO announced coronavirus as a global emergency. The virus started spreading to other countries and even to continents within days after the announcement. As of February 22, according to the World Health Organization Report, the virus has spread not only within China but also, to twenty-eight other countries in different regions. The epidemic has spread to countries in all different income groups from high-income countries (the United States, Italy, Spain, Norway, etc.) to middle-income countries (China, Russia, Turkey, Iran, etc.) to low-income countries (Afghanistan, Niger, Chad, Bolivia). Not all high-income countries have taken quarantine measures at the same rate against this epidemic. Although Greece, for example, is a high-income country with a lower GNI per capita value than the U.S., it took quicker quarantine measures during the epidemic. One day after the first confirmed case, Greece canceled all the carnival events and after thirteen days closed all schools while the US confirmed the first case on January 30 in Chicago, but the government did not take quarantine measures until mid-March. Based on the differences between countries, we think that there might be a relationship between the number of cases and the date when the quarantine measures started, and therefore, we will investigate this relationship by econometric causality. While analyzing this relationship with causality, countries will be divided into four income groups as classified by the World Bank. Current statistics show that prioritizing the quarantine measures taken regardless of income level has a significant impact on the increase in the number of cases. From this idea, we will check whether there is a causality between the number of cases and the day of quarantine measures for countries with different income levels.

Data Description:
1. Data sources for COVID-19 including the number of cases are WHO, CDC, ECDC, Worldometers.info, the COVID Tracking Project, John Hopkin University & Medicine Coronavirus Resource Center Database.
2. Data for quarantine measures for each country will be collected by the authors and the sources will include state and national government health departments and local media reports.
3. Data sources for grouping countries according to their income levels are the World Bank World Development Indicators (WDI) Reports, Gross National Income (GNI) per capita data.

JEL Codes: C10, C23

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