**Legitimacy and Policy during Crises: Subnational COVID-19 Responses in Bolivia**

**Methodological Appendix**

**List of Data Collection Sources:**

Ministry of Health: daily confirmed cases and death reports

Servicios Departamental de Salud (SEDES). Departamental Health Services information (for all 9 regions)

Bolivia Segura: Official governmental information service for COVID-19 in Bolivia

Gaceta Oficial del Estado Plurinacional de Bolivia: Repository of all national laws in the country

Ministry of Communication

Ministry of Public Works: responsible for transportation decisions

National Institute of Statistics: demographic, economic, health, and other information

Servicio de Registro Cívico (SERECI): deaths reports

Agencia Boliviana de Información (ABI)

The New York Times: death reports

Our World in Data: regional trends

News media outlets

**Public Policy Variables**

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Description** | **Coding** |
| Stay at home | Record orders to “shelter-in- place” | 0 -No Measures0.33 -Recommend not leaving the house 0.66 -partial requirements (specified groups or times)1 -Require not leaving the house with minimal exceptions (e.g. allowed to leave only once a week, or only one person can leave at a time, etc.) |
| School Closure | Closure of in-person classes | 0 -No measures0.33 -Recommend closing0.66 -Partial (only some levels and/or times (e.g. just high school, or just public schools)1 -Require closing all levels |
| Workplace Closure | workplaces closures, restrict working hours, and / or closure of specific economic activities/sectors | 0 - No measures0.33 -Recommend closing (or work from home)0.66 -Parcial (or work from home) for some activities, sectors or categories of workers, and times1 -Require closing  |
| Public Events Cancelled | Prohibition of events, social, cultural or religious activities and sports | 0 -No measures0.5 -Recommend cancelling1 -Require cancelling  |
| Restrictions on gatherings | Restrictions on crowds of people | 0 -No restrictions0.33 -Restrictions on very large gatherings (limit is above 1000)0.66 -Restrictions on gatherings between 11-100 people1 -Restrictions on gatherings of 10 people or less. |
| Public transit suspended | Traffic restrictions, schedules, types, or routes of travel in each department | 0 -No measures0.33 -Recommended closing0.66 -Significantly reduce volume/route/means of transport available1 - Require closing (or prohibit most citizens from using it) |
| Information campaign | Measures to disseminate information on health, contagions, prevention measures, tests, and laws | 0 -No covid-19 public information campaign0.5 -Public officials urging caution about covid-191 -Coordinated public information campaign (e.g. across traditional and social media) |
| Use face masks | Use of face coverings | 0 -No measure0.33 -Recommended0.66 -Partial and mandatory1 -total/mandatory implementation |
| Internal Travel Control | Traffic restrictions, schedules, types, or routes of travel within each department | 0 -No measures0.33 -Recommend not to travel between regions/cities0.66 -Relaxed moving restrictions1 -Internal moving restrictions in place |
| International Ban | Movement restrictions on international travel including air, land, water | 0 -No measure0.33 -Quarantine arrivals from high-risk regions0.66 Ban on arrivals from some regions1-Ban on all regions or total border closure |

To measure the government's response and compare the measures in each department, we combined these 10 variables in an index developed in conjunction with teams at Oxford University and the Observatory for the Containment of COVID-19 in the Americas at the University of Miami (Hale et al 2020; Knaul et al 2020). We take into account the time that has passed since the implementation of each measure (Knaul et al 2020):

$$IPP\_{it} =100 \* \frac{\left[\sum\_{j=1}^{n}I\_{jt}\left(\left[\frac{djt}{Dt}\right]^{.5}\right)\right]}{10}$$

Where:

$IPP\_{it}$ = index of public policy adoption in the country/department $I$at time $t.$

$I\_{j}$ = index $j$of public policy, where$j$goes from 1 to $n=10. $

$Dt$ = Days since first reported case until time$t.$

$dt$= Days since implementation of public policy$j$until time$t.$

The value of$IPP\_{it}$ is calculated by adding each of the 10 variables adjusted by the day of implementation of each one in relation to the reported first confirmed case. Additionally, it considers or weighs the moment when public policy j is implemented, giving more weight to the first days versus the last. That is, the index acquires higher values the earlier a certain measure has been implemented, taking as base date the appearance of the first case.

In the aggregate, each state *i* receives a daily rating between 0 and 10, which is the sum of the different variables, which is then normalized to 100. Public policy measures that are only a few, are flexible and implemented later produce lower values in the index.

**Mobility Data**

We collect daily mobility data from Google’s COVID-19 Community Mobility Reports. The mobility data shows the variation that is occurring in the number of visits to certain places (grocery stores, parks, workplace, retails, and transit stops) in each department. The mobility numbers show the change in population mobility during the pandemic compared to usual mobility in the same time period.

**Protest Data**

We collected daily protest data from national and local Bolivian newspapers. We used a representative newspaper for each department, and when available, complimented this information with more local sources. The following are the newspapers consulted (by department):

1. La Paz: El Diario, La Razón, Página Siete, Erbol, El Alteno
2. Cochabamba: Los Tiempos, Opinión
3. Santa Cruz: El Deber, El Dia
4. Chuquisaca: Correo del Sur
5. Oruro: La Patria
6. Potosi: El Potosí, El Salar
7. Beni: La Palabra del Beni, Contacto
8. Tarija: El País, Nuevo Sur
9. Pando: EL Progreso, La Perla del Acre

In addition to recording the number of daily protests in each department, we also collected the following information about each protest event:

1. Location within the department (municipality)
2. Identity of the protester
3. Identity of protester 2 (if there we more than one group)
4. Tactic (e.g. marc, hunger strike, riot, virtual protest)
5. Target
6. Violence
7. Demand
8. Demand 2 (if there was more than 1 demand)
9. Demand 3 (if there were more than 2 demands)
10. Government response (no response, police presence, repression, dialogue, legal actions, etc)
11. Damage (coded for material damage and human injury)