

Operation of and Demand for Public Transport during Covid-19: Descriptive Evidence from Sierra Leone

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Research Question

Covid-19 restricted the operation of private businesses + increased businesses' responsibility for health safety.

- 1 How do government regulations affect the operation of public transport?
- 2 To what extent do operators forgo profits and incur expenses to comply with recommendations?
- 3 How do citizens adjust their mobility, economic activity and expenditures to Covid-19 regulations and infection risk?

Pilot survey via phone with 53 bus drivers and 640 citizens in Freetown, April 22nd - May 16th.

- Citizens 75% age 18 - 35 years old. 93% completed junior or higher level education (secondary, tertiary).

Social distancing and stringent hygiene measures. Curfew 9pm - 6am.

Public transport:

- No sitting in middle rows, no standing in buses.
- Drivers required to provide hand sanitizers to passengers.
- All transport parks must have hand washing facilities.
- Wearing of face masks.

Citizens:

- Schools closed. Periodic market days banned.
- Worship in churches and mosques banned.
- Traditional engagements e.g. weddings limited to 20 people.
- Bars, clubs, restaurants reduced opening hours.
- Inter-district travel prohibited.

Public Buses in Sierra Leone: Big bus



Public Buses in Sierra Leone: Mini Bus



Public Buses in Sierra Leone: Poda Poda



Economic Impacts of Covid-19: Bus Operations

- **Buses reduce operations.** Daily # of round trips dropped from 10 during normal times to 7-8 per day.
- **Revenue targets reduced** to 70% of normal times, drivers' daily earnings from bus fares fell by 46%.
- **Passenger fare prices** remained the same.
- Negative economic shock shouldered by both employers and drivers. Bus owners reduce fees collected from drivers to 72% of normal times, and hold contractual salaries constant.
- Big buses hardest hit by revenue decline. Most affected by social distancing restrictions.

Health and Safety Measures on Buses

Self-reports from bus drivers, and passenger observations.

- **Loading restrictions:** only 8% of drivers report overloading. Higher among big buses: 21% of drivers.
- **Curfew compliance:** 92% of drivers work past 9pm, 64% past 10pm.
- **Hand sanitizer for passengers:** 8% of drivers report to provide. Less than 2% of passengers say they were offered. ⇒ High cost: large bottle 26,000 Leones (USD 2.60) \approx 33% of drivers' total daily income.
- **Hand washing stations “Veronica buckets”:** 35% (poda poda), 42% (big bus) of passengers report access when boarding bus. 68% carry own hand sanitizer, others mostly name lack of affordability.

Health and Safety Measures on Buses

- **Hand hygiene among drivers:** 31% say wash hands after each ride or more frequently, but 32% at most twice per day.
- **Cleaning of buses:** 42% report increase, avg. twice per day. Higher compliance among smaller buses.
- **Wearing of face masks:** 45% of drivers. 86% of passengers report to use masks in public: 96% compliance on buses, 87% and 74% on motorized rickshaws and taxis.
- **Enforcement by traffic authorities:** 67% of drivers stopped for loading, only 8% for use of hand sanitizer.

Demand for Public Transport among Citizens

Most frequent means of transport:

- **...during normal times:** 64% use buses, 29% use motorized rickshaw, taxi or motorcycle; 2% do not take transport.
- **...during past one week Covid-19:** 44% use buses, 33% use rickshaw, taxi or motorcycle; 19% used no public transport.

⇒ People are less likely to go out, and switch from high capacity transport to modes with fewer passengers. 42% switch transport.

- **Reasons for switch:** 59% normal transport waiting time too long, 51% normal transport not safe given Covid-19.
- **Cost of transport:** one-way fare normal times 1,500 Leones; during Covid 2,000 Leones. Increase explained by switch to more expensive transport, not by fare increases.

Economic Impacts of Covid-19: Citizens

- 28% could carry out economic activity as normal, 27% do not engage in economic activity. **45% of people were unable to carry out their regular activity.**
⇒ 9% did not work at all. Large impacts on small businesses: 22% report less demand or fewer/no customers, 20% worked fewer hours.
- Reasons for not carrying out activity as normal: (i) **49% government restrictions** e.g. opening hours, social distancing, operation of markets, (ii) **44% fear of virus**, not safe to work.

Economic Impacts of Covid-19: Citizens

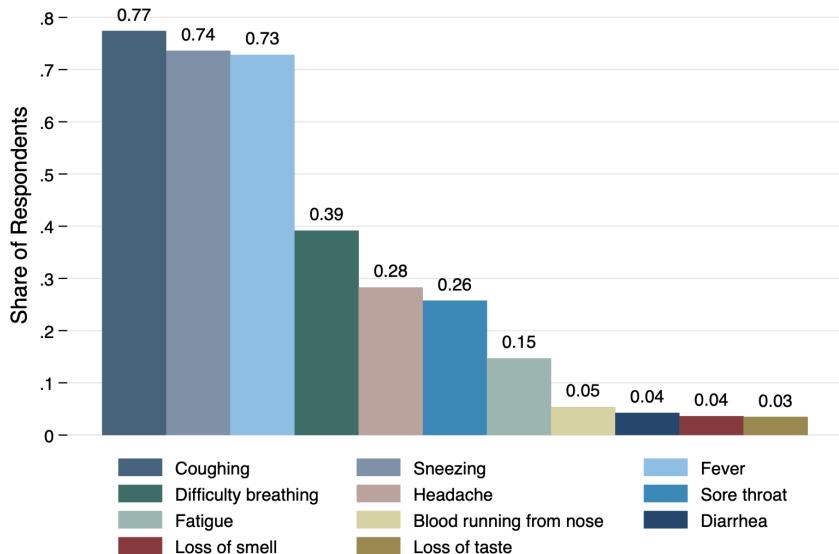
- **Daily income:** normal times 30,000 Leones, during Covid-19 14,286 Leones. **Median income ↓ by 50%.** 37% borrowed money in the past one week to cover expenses. Median amount: 160,000 Leones.
- **82% changed their expenditure.** Less spending on clothing (31%) and communication (13%). Higher spending on food (70%), electricity (8%) and medicine (14 %).
- **Reasons for expenditure ↑:** Fears over price increases and shortages ⇒ 57% of individuals stockpile, 43% concerns over future prices/inflation/tariffs, 31% higher consumption.

Physical and Mental Health

- **Health expenditure:** 53% of individuals bought products in past 2 weeks: 79% at pharmacies, 18% street vendors, 2% doctor/clinic ⇒ high demand, some stockouts, low utilization of qualified providers.
- 54% preventative products (e.g. soap, face mask). 66% curative medicine (e.g. paracetamol, cough and cold drug).
- **Mental health:** 90% of individuals report to have worries. Among those, 47% named Covid-19. 86% worry nearly everyday.
⇒ Coping mechanisms: going to church, praying (53%) and speaking to family or friends (35%).
- **Future expectations about virus** “When will things go back to normal?” 71% answered between April-July, 10% in August or September, 19% at the end of 2020.

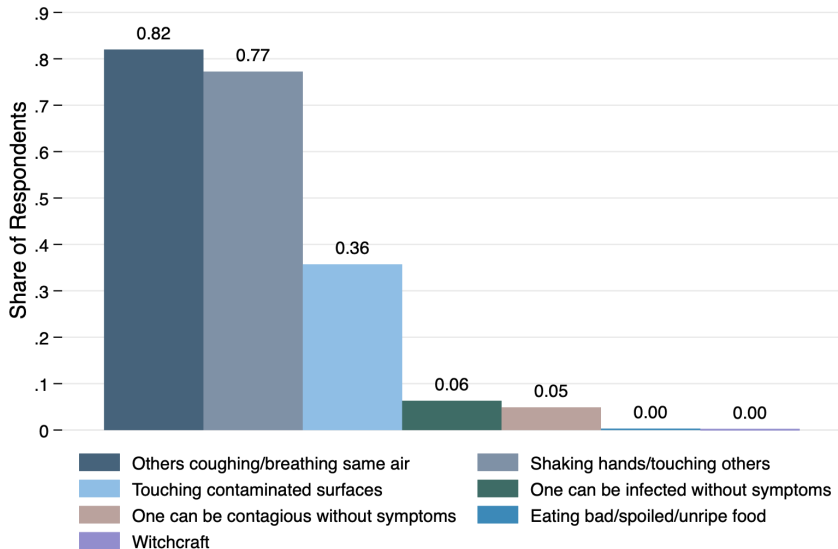
Thank you

Knowledge: What are the symptoms of Covid-19?



N = 633 adults

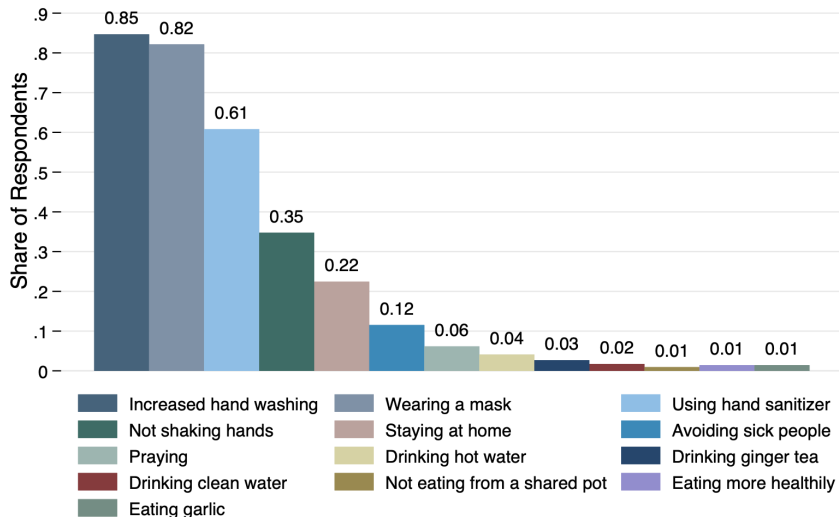
Knowledge: How is Covid-19 transmitted?



N = 633 adults

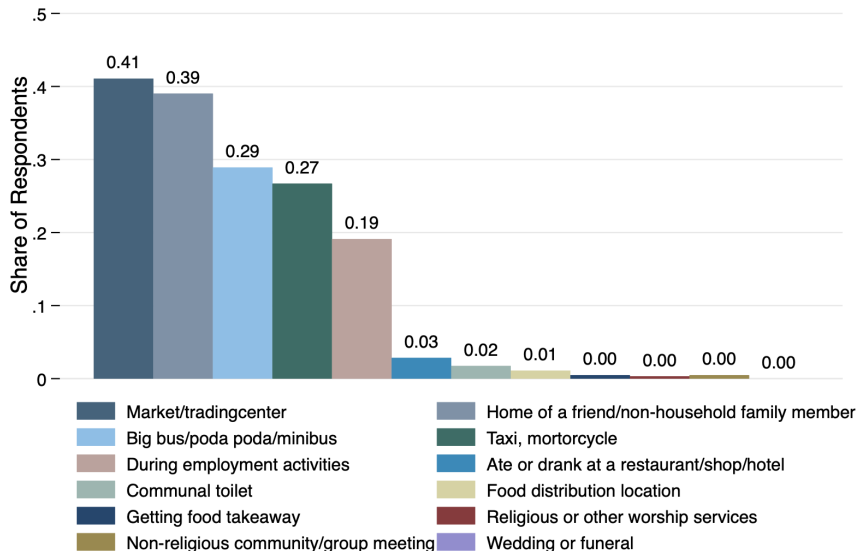
Knowledge: What do you do to prevent getting Covid-19?

What do you do to prevent yourself from getting infected?



N = 633 adults

Social Distancing and Gov't Regulations



N = 633 adults

Knowledge and Beliefs about Covid-19

- Infection risk: 53% of individuals believe that could contract virus during daily activities. 88% believe that if they had Covid-19, they would infect others.
⇒ Reasons for risk: “social distancing is difficult”, “interact with many people”, “can’t avoid touching surfaces in public spaces”
- Health consequences: 65% believe they would fall ill, but recover. 26% think they would die.
- Traditional beliefs: 50% of individuals agree with statements “If you eat a lot of garlic it will help protect you from the virus” and “If you drink tea with ginger it will help kill the virus”.
⇒ Main reasons stated: i) medical composition of garlic/ginger and ii) having heard from trusted sources of information.