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# POLICY BRIEF

RESPONDING TO THE COVID-19 PANDEMIC

Volume XIII, No. 2, APRIL 2020

ISSN # 2094-3342



De La Salle University

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Angelo King Institute  
for Economic and Business Studies

## The Economic Impact of the Metro Manila (NCR) Enhanced Community Quarantine

Metro Manila (NCR) comprises 37.5% of the Philippine gross domestic product (GDP) and the 30-day enhanced community quarantine (ECQ) will cause a significant decline in the national economy. This policy brief is based on a persistent inoperability input-output model to estimate two metrics: inoperability and economic losses. This takes into account the interdependent nature of the different sectors of the economy and considers the impact of the pandemic on the productivity of sectors directly affected by the ECQ such as the manufacturing, construction, trade, finance, private sector services and transport sectors. Unlike previous models, PIIM results will provide insights on the impact of prolonged inoperabilities on the economy. Results show the degree by which each sector is affected and how much economic losses they incur. Such information will be essential in developing strategies for recovery.

### Policy Recommendations

The ECQ is a necessary measure in suppressing the spread of the virus. While there are social benefits resulting from the ECQ, the private burden on the people is extensive. Aside from the economic burden lost income, the uncertainty of the future takes a toll on mental health as well. It is crucial that government provide assistance to the different sectors and allocate their limited resources efficiently. Based on our estimates, the following policies should be adapted:

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- 1. Provide support for healthcare and other essential services employees** – Healthcare workers and other essential services personnel provide the society with service that puts their lives at risk. They are exposed to different factors that may ultimately lead to contracting the disease. Provision of the necessary personal protective equipment is imperative for these sectors. Since transportation is limited, employers should provide shuttle services or proper facilities to reduce their travel stress.
- 2. Provide support for Micro, Small and Medium Enterprises (MSMEs)** - Given that more than 99 percent of establishments in the Philippines are classified as MSMEs, it is imperative for government to provide assistance in ensuring that these businesses can tide through the crisis. This can come in the form of tax holidays and reduced fees. Retention of workers is key in alleviating worker stress during these critical times. The government can provide social support packages that will partially cover them during this crisis period.

3. **Unemployment support** – Employees laid off due to the pandemic should receive support in order to sustain their families during the crisis. This however, should remain a temporary arrangement for the crisis.

4. **Delay in implementation of Corporate Income Tax and Incentives Reform Act (CITIRA)** – The CITIRA implementation this year is hinged on the assumption that businesses are operating under normal circumstances. However, given the current situation, larger firms are providing support for their employees despite lower sales and revenues. Delaying the implementation of CITIRA will give firms more resources in retaining their employment base.

5. **Assistance to farmers** - Government should provide assistance to farmers in distributing their harvest. Given that the government is regulating movement of people across city and provincial borders, traders cannot exercise their usual routine when it comes to delivering goods across provinces.

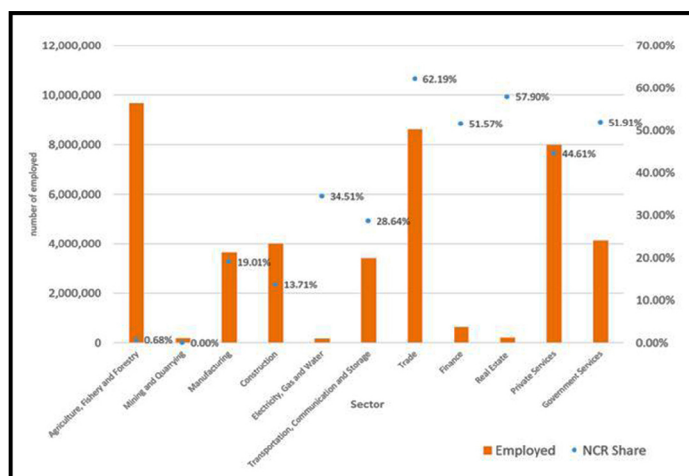
6. **Support for the transportation sector** – Airlines have cancelled numerous flights and offered easy refund and rescheduling mechanisms for their customers. Government should recognize this and provide assistance through reducing taxes and fees even beyond the pandemic period. Government should take the opportunity to improve land transportation with the reduced number of vehicles on the roads.

7. **Support for ensuring supply chain continuity** – Manufacturing plant plants to need to continuously operate during the pandemic period to ensure that supermarkets have adequate supplies for the people and essential services can be delivered. Government should make it easier for these firms to transact. For example, raw materials shipped through ports should be released quickly.

## Introduction

The COVID-19 pandemic has caused widespread turmoil to the global economy. Analysis of the implications of the Covid-19 pandemic on global supply chain networks suggest that the ripple effects will have large impacts (Yu and Aviso, 2020). Countries around the world have implemented unprecedented measures such as community quarantines and lockdowns in order to control the spread of the virus. Figure 1 shows the number of employed on a national scale and the percentage share of NCR relative to

the Philippine GDP for each sector. NCR services sector, which includes transportation, trade, finance, real estate, private services and government services sectors, contributes a significant share, accounting for 52.82% of the Philippine Services GDP. It is further observed that the NCR share in the trade sector, accounts for 62.19% of national trade. In addition, the trade sector is one of the largest employers, second only to the agriculture sector. However, NCR has a very small agriculture sector making the trade sector the largest employer in the region. The private services sector also has a strong contribution in terms of employment as it represents 18.73% of the workforce.



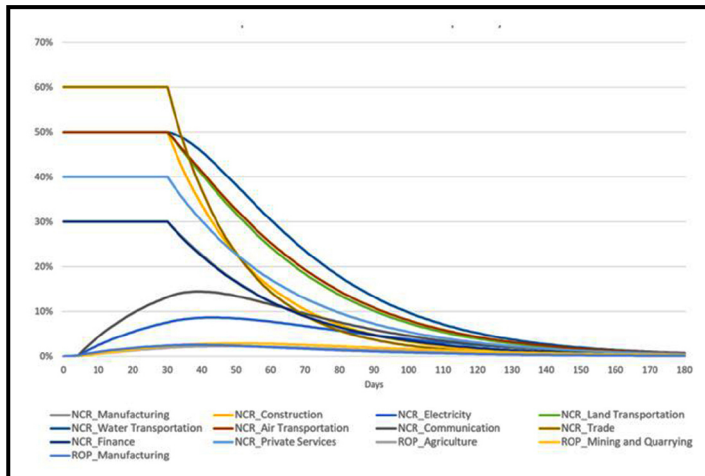
*Figure 1. Number of employed for each sector in the Philippines and the percentage of NCR contribution to Philippine GDP per sector.*

Source: Philippine Statistics Authority (2020a) and Philippine Statistics Authority (2020b).

## Model Specification and Results

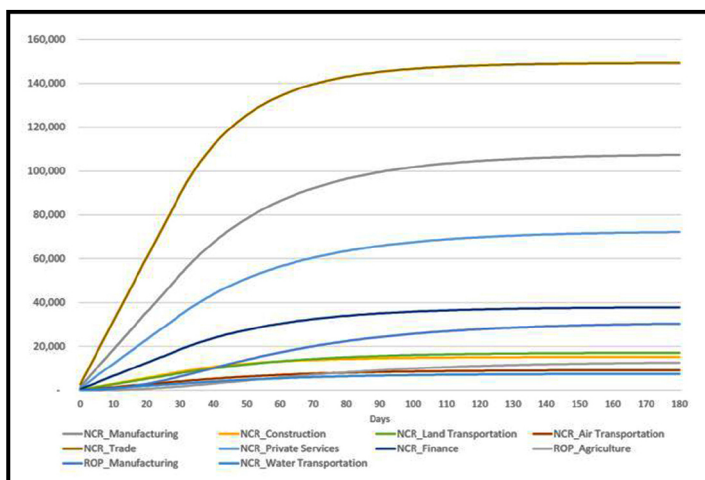
This study uses a persistent inoperability input-output model (PIIM) to assess the economic impact of Metro Manila ECQ. This method accounts for the inter-industry transaction flows across sectors. Initial decline in transactions resulting from the ECQ were based on the National Economic and Development Authority (2020) estimates. The affected sectors are NCR's manufacturing, construction, land transportation, water transportation, air transportation, trade, finance, and private services sectors. The PIIM results in two metrics: inoperability and economic losses. Inoperability is defined as the inability of a sector to operate normally (Haimés and Jiang, 2001). The monetary losses resulting from the inoperability that cascades through the economic system is expressed as monetary losses (Santos and Haimés, 2004).

Figure 2 presents the inoperability that various economic sectors bear over a period of time. Under normal circumstances when a disruption occurs, economic sectors have a certain level of resilience that will allow them to cope depending on their size. However, during the ECQ, affected sectors cannot recover. Instead, their inoperability level persists over the ECQ period. Hence, the aforementioned affected sectors exhibit a flat inoperability line for the first 30 days in Figure 2.



**Figure 2. Daily inoperability levels for each sector.**

Figure 3 presents the ten sectors that have the highest economic losses over the ECQ and recovery period. The trade, manufacturing and private services sector are the hardest hit sectors. The overall economy of the Philippines is estimated to lose PhP 501 billion resulting from the pandemic accounting for ripple effects. A breakdown for all sectors is available upon request from the authors.



**Figure 3. Top 10 sectors in terms economic losses in million PhP.**

Impact on various sectors within Metro Manila:

- While the trade sector experiences the highest level of inoperability during the ECQ, it is one of those sectors that has a fast recovery rate. By the second month, its inoperability level is lower than most sectors.
- With strict regulation on international and domestic travel, the transportation industries are severely affected. Airlines have cancelled international and domestic flights due to travel restrictions and reduced demand. This has caused layoffs across different companies. In addition, public transportation sector is operating at reduced capacity with less passengers and social distancing measures. In effect, this results in reduced demand for petroleum products.
- Manufacturing firms are faced with continuous demand for their goods however, raw materials may not necessarily be readily available as some firms may be sourcing raw materials from abroad.
- It is worth noting that initially unaffected sectors and regions will also suffer some level of inoperability due to ripple effects. The communication and the electricity sectors in NCR will also suffer from some level of inoperability. While there is a decline in demand by commercial establishments which renders an initial increase in available capacity for households, work from home and online learning arrangements can cause a surge in demand for electricity and communication services which can cause some inoperability over time.
- School closures also deliver ripple effects to business establishments dependent on students as their main clientele. Restaurants and service providers around offices experience a similar scenario when office workers are working from home.
- Business process outsourcing (BPO) firms have made similar arrangements for their employees going as far as purchasing desktops and providing loans to their employees. However, international clients have slowly been pulling out due to business slowdown in their own countries, which may affect employment.
- The health sector, most especially, experiences inoperability at various levels. As frontliners, doctors and nurses are exposed to the virus. Even if they do not contract the disease, they can be considered as persons under monitoring (PUM) or patients under investigation (PUI), once they are unnecessarily



exposed or they exhibit symptoms. In addition, if a member of their household is classified as a PUM or PUI, or worse, contracts the disease, they may have to tend to personal matters which contributes to absenteeism. Other essential sectors that remain open such as supermarkets, banks, convenience stores, pawnshops security agencies, and business process outsourcing firms among others are faced with similar predicaments.

#### Impact on sectors outside Metro Manila

- Furthermore, inoperability is not limited to sectors within NCR. The agriculture, manufacturing, mining and quarrying sectors for the rest of the Philippines also experiences reduced output due to demand reduction. For example, farmers were unable to sell their produce at the trading post due to lack of buyers that may have been caused by mobility restrictions, which resulted to throwing their products out (Soriano, 2020). Crossing provincial borders have become more challenging as strict ECQ rules are imposed.
- Tourism industries across the country are affected with the sudden decline of tourist arrivals and reduced domestic tourism. As of 2018, tourism direct gross value added is 12.7% of Philippine GDP. Tour operators dependent on tourist arrivals stand to lose their source of income. This is further evident for Region 4A which has just been starting to recover from the Taal Volcano Eruption earlier this year.

## Conclusions and Recommendations

The inoperability in the NCR economy results from a mix of supply reduction and demand reduction perturbations. Supply reduction perturbations result from supply chain disruptions, as well as workforce reduction due to either travel restrictions or absenteeism, Demand reduction perturbations result from a drop in total purchases of goods resulting from the ECQ. The combination of multiple perturbations make analysis of the impacts especially challenging. Furthermore, these estimates do not include impacts on the informal sector of the NCR economy, but it is plausible to assume that similar losses are incurred there as well.

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