Impact of the Global COVID-19 Pandemic on FDI: Evidence from a Small Open Economy

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25th Annual Conference on Global Economic Analysis
"Accelerating Economic Transformation, Diversification and Job Creation"
Virtual Conference|09 June 2022

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Introduction

- Foreign direct investment worldwide has been severely hit by the COVID-19 pandemic and fell by 35 per cent to reach $1 trillion at the end of 2020 (from $1.5 trillion in 2019)
- FDI in developing economies decreased by a more moderate 8 per cent, mainly because of resilient flows in Asia
  - FDI flows to Africa fell by 16 per cent to $40 billion (lowest since 2005)
- FDI in Mauritius
  - Represents one-fifth of the island's GDP and over 20% of employment, resulted in significant spillover effects on the whole economy
  - 48% decline in FDI inflows in 2020
    - January 2020-June 2020
      - Countries: 37.1% (France) to 99.1% (China)
      - Sectors: 52% (Communication) to 100% (Construction)

Objectives

01 Impact of the outbreak of the COVID-19 pandemic on the FDI flows in Mauritius

02 Analysis in terms of the main geographical origins and main sectors

Data

Data
Main sources of investments:
11 countries and **7 sectors**

Data
Monthly **gross direct investment flows (Rs Million)** data from **January 2014 to June 2020** (78 observations)

Data
Data extracted from the **Bank of Mauritius (2020)**

Overview Foreign Direct Investment Flows

	January-June		% Decrease
	2019	2020	2019-2020
Geographical Origin			
France	3395.91	2129.06	**37.3**
South Africa	2498.97	696.66	72.1
Switzerland	801.19	239.81	70.1
United Kingdom	444.70	170.72	61.6
United Arab Emirates	291.32	172.83	**40.7**
Belgium	223.88	32.05	85.7
China	617.22	5.69	99.1
United States of America	25.21	355.25	**+1309.2**
Reunion	20.25	0.58	97.1
Germany	317.97	55.45	82.6
India	501.34	132.99	73.5
Sector			
Manufacturing	98	1,617	+1550
Construction	2	0	**100**
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	52	64	+23.1
Accommodation and Food Service Activities	5	27	+440
Information and Communication	74	36	51.7
Financial and Insurance Activities	189	197	+4.4
Real Estate Activities	9,563	4,030	57.9

- Geographical origin: overall decrease observed
- Sector: overall increase observed
- **Is it due to the outbreak of the COVID-19 pandemic in December 2019?**

Methodology

ARIMA Model
Determine countries/sectors
to be used as appropriate controls
for causal analysis

BSTS Model
Apply Bayesian structural
time-series (BSTS) models

Methodology

ARIMA Model

Determine countries/sectors
to be used as appropriate controls
for causal analysis

1. Break sample into two: pre-COVID period (before December 2019) post-COVID period (January 2020-June 2020)
2. Estimate the ARIMA model for each series using data from January 2014- December 2019
3. Forecast ARIMA model for period January 2020-June 2020
4. Compare predictions and the real behaviour of the series
5. Series where predictions and real values are mostly matched are considered as suitable controls

Methodology

BSTS Model
Apply Bayesian structural time-series (BSTS) models

1. Fix the intervention event (i.e. outbreak of the COVID-19 pandemic) to December 2019
2. Use the pre-intervention period data to find an optimal BSTS model for each series
3. Use the optimal BSTS model to provide forecasts in the post-intervention period for each series in the absence of the pandemic
4. Estimate the causal impact of the pandemic by subtracting the real values of the series from the counterfactual scenarios (i.e. the predicted data) for the post-intervention period

Findings - ARIMA Results

	Predicted Gross Direct Investment Flows (Rs Million) (Jan 2020 - Jun 2020)	Original Gross Direct Investment Flows (Rs Million) (Jan 2020 – Jun 2020)	Absolute effect	Relative effect
Country				
France	379.38	354.84	-25	-6
South Africa	245.75	116.11	-130	-53
Switzerland	9.45	39.97	31	+323
United Kingdom	50.07	28.42	-22	-43
United Arab Emirates	12.77	28.81	16	+125
Belgium	10.36	5.34	-5	-48
China	17.61	0.95	-17	-95
United States of America	5.24	59.21	54	+1029
Reunion	3.69	0.10	-4	-97
Germany	9.42	9.54	0	-2
India	**3.91**	**22.16**	**18**	**+467**
Sector				
Manufacturing	44.0	269.47	225	+512
Construction	2.1	0	-2	-100
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	**7.2**	**10.67**	**4**	**+49**
Accommodation and Food Service Activities	6.4	4.5	-2	-30
Information and Communication	24.1	5.93	-18	-75
Financial and Insurance Activities	13.0	32.85	20	+153
Real Estate Activities	1210.0	671.7	-538	-44

Findings – Cumulative Effects

France
+1.6%
<u>53%</u>

South Africa
45% ▼
<u>98.50%</u>

Switzerland
46% ▼
<u>95%</u>

United Kingdom
-84%
<u>85%</u>

United Arab Emirates
-45%
<u>86%</u>

Belgium
78% ▼
<u>98.92%</u>

China
99% ▼
<u>95.34%</u>

United States of America
+161%
<u>72%</u>

Reunion
99% ▼
<u>95.27%</u>

Germany
-56%
<u>67%</u>

▼ *: Significant decrease;* ▲ *: Significant increase; Figures in italics and underlined figures represent the relative effect and probability of a causal effect respectively.*

Findings – Cumulative Effects

Manufacturing
410% ▲
99.98%

Construction
-100%
88%

Accommodation and Food Service Activities
-85%
59%

Information and Communication
-51%
69%

Financial and Insurance Activities
-80%
72%

Real Estate Activities
31% ▼
99.06%

▼ : Significant decrease; ▲ : Significant increase; Figures in italics and underlined figures represent the relative effect and probability of a causal effect respectively.

Conclusions

01 Initial Examination

As compared to the same period the previous year (January 2019-June 2019), there was a change in the figures of the gross direct investment flows (January 2020-June 2020)

02 ARIMA Model

Direct investment flows series indeed departed from its actual trends two months after the outbreak of the pandemic was first declared

03 BSTS for Causal Analysis

Negative effect on investments
- five countries (Belgium, China, South Africa, Switzerland, Reunion)
- "Real Estate Activities" sector

A positive and significant influence on the "Manufacturing" sector

Policy Recommendations

- Government could work with industries and sectors that are highly impacted by COVID-19 to develop resilience strategies and help them reimagine their business models
- Diversify operations and spread facilities across regions; Deepen participation in global value chain (GVC) and regional value content
- Mauritius should broaden the circle of opportunities by capitalising on market access arising from the free trade agreement (FTA) with China, the preferential trade agreement with India, the African Continental Free Trade Area (ACFTA) with Africa
- Re-energize multilateral cooperation on investment, particularly on matters related to investment governance
- Government should maintain a legal and regulatory framework that will keep Mauritius highly ranked on “Ease of Doing Business” together by maintaining good government indices

THANK YOU