From Protests to Policies: The Effect of Hong Kong Political Changes during 2019 on its Trade

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Recall

Background & History

- **2019**: Massive protests and social movements in Hong Kong
- **2020**: Mainland and HK Governments issue the *National Security Law*
- **2020**: US *Executive Order on Hong Kong Normalization (EO)* enacted[1]

Research question

How did the 2019 political protests and the subsequent policies change affect Hong Kongs international trade with mainland China and global partners?

[1] The CBP now requires goods produced in Hong Kong to be marked as products of China, subjecting them to *Section 301* tariffs imposed on Chinese products in 2018

Data Overview

Trade Data, 2005 – 2023, annual & monthly

- Merchandise Trade: Exports and imports by commodity and region
- Services Trade: Exports and imports in various service categories
  - *Hong Kong Census and Statistics Department*
  - *Singapore Department of Statistics*

Macroeconomic Indicators, 2005 – 2023, annual

- GDP
- Unemployment Rate
- Inflation Rate
- FDI
- Exchange Rate
  - Source: *World Bank*

Top Six Trading Partners for Hong Kong

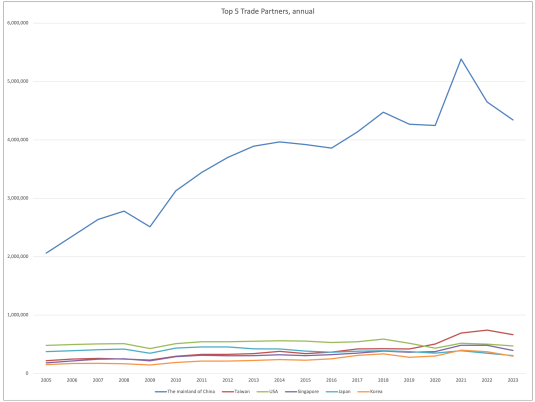

Figure 1: Including mainland China

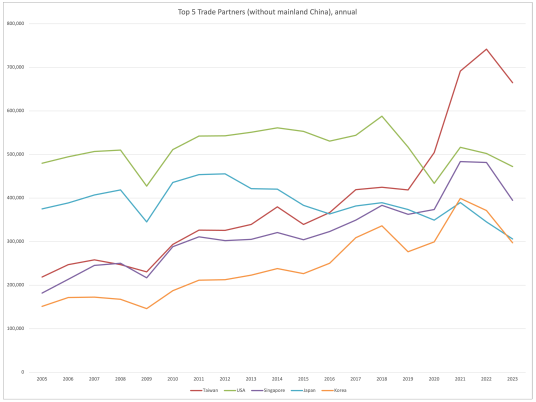

Figure 2: Excluding mainland China

Difference-in-Differences (DID) Approach

- Offsets effect from other events like Covid19 Pandemic
- Isolates the effect of the treatment (2019 political changes in HK) by controlling for time-invariant differences and common trends
- Similar demographic and geographic characteristics.

DID Regression Model

Regression Equation:

$$\begin{aligned}\ln(\text{Trade}_{it}) = \beta_0 &+ \beta_1 \text{Post2019}_t + \beta_2 \text{HK}_i + \beta_3 (\text{Post2019}_t \times \text{HK}_i) \\ &+ \gamma_1 \ln \text{GDP}_{it} + \gamma_2 \text{Unemployment}_{it} \\ &+ \gamma_3 \text{Inflation}_{it} + \gamma_4 \ln \text{FDI}_{it} + \gamma_5 \text{ExchangeRate}_{it} + \epsilon_{it}\end{aligned}$$

- Dependent Variable: $\ln(\text{Trade}_{it})$ - Log of trade value
- Key Variable: β_3 - Interaction term (Post2019 × HK)
- Control Variables: GDP, Unemployment Rate, Inflation, FDI, Exchange Rate

DID Regression Results: Annual Data

Statistic	Model 1	Model 2	Model 3	Model 4
Observations (SG)			24	
Observations (HK)			19	
R-squared	0.965	0.891	0.964	0.739
Adj. R-squared	0.948	0.848	0.951	0.664
F-statistic	55.59	21.16	70.25	9.905
Coefficients				
Intercept	-8.2265*	4.8559	-8.6847**	18.8508***
	(3.916)	(5.032)	(3.735)	(5.658)
Post2019	-0.0301	0.1471***	-0.0411	0.2405***
	(0.041)	(0.037)	(0.035)	(0.045)
HK	-8.2265*	4.8559	-8.6847**	18.8508***
	(3.916)	(5.032)	(3.735)	(5.658)
Post2019:HK	-0.0301	0.1471***	-0.0411	0.2405***
	(0.041)	(0.037)	(0.035)	(0.045)
ln_GDP	1.0005***	-	1.0889***	-
	(0.197)	-	(0.120)	-
Unemployment_Rate	0.0785	-0.0951*	0.0879**	-0.2146***
	(0.044)	(0.048)	(0.040)	(0.059)
Inflation_Rate	0.0576**	-0.0016	0.0613***	-0.0312
	(0.018)	(0.024)	(0.017)	(0.034)
ln_FDI	0.0360	0.2834***	-	-
	(0.062)	(0.067)	-	-
Exchange_Rate	0.5807	-0.0974	0.5103	-2.7116*
	(0.683)	(1.143)	(0.655)	(1.433)

DID Regression Results: Monthly Data

Statistic	Model 1	Model 2	Model 3	Model 4
Observations (SG)			288	
Observations (HK)			228	
R-squared	0.998	0.997	0.996	0.996
Adj. R-squared	0.998	0.997	0.996	0.996
F-statistic	26120.0	28950.0	20270.0	19350.0
Coefficients				
Intercept	-2.3241*	-2.5393*	13.2869***	19.4851***
	(1.118)	(1.134)	(0.587)	(0.090)
Post2019June	-0.2054***	-0.1777***	0.0139	0.2112***
	(0.029)	(0.029)	(0.031)	(0.027)
HK	-7.9528***	-7.7171***	-1.3421***	2.4569***
	(0.592)	(0.598)	(0.497)	(0.383)
Post2019June:HK	0.2729***	0.2543***	0.2920***	0.2336***
	(0.030)	(0.030)	(0.036)	(0.040)
ln(GDP)	0.6506***	0.7314***	-	-
	(0.042)	(0.038)	-	-
Unemployment Rate	0.0491***	0.0403***	-0.0288**	-0.0953***
	(0.010)	(0.010)	(0.011)	(0.010)
Inflation Rate	0.0422***	0.0390***	0.0262***	0.0078
	(0.004)	(0.004)	(0.005)	(0.005)
ln(FDI)	0.0739***	-	0.2064***	-
	(0.018)	-	(0.019)	-
Exchange Rate	0.4504***	0.4186***	-0.5919***	-1.1716***
	(0.093)	(0.094)	(0.077)	(0.060)

Table 2: DID Regression Results (Monthly Trade Data)

Conclusion

- **Positive Effect:**
  - The DID regression results indicate a significant positive effect of the 2019 political changes on Hong Kongs trade volume relative to Singapore.
  - Both annual and monthly data analyses consistently show an increase in trade post-2019.
- **Possible Explanation:**
  - One plausible explanation is that the increase in trade with mainland China may have offset decreases in trade with other economies.
  - This hypothesis needs further verification.
- **Implications:**
  - Hong Kong is (passively or actively) strengthening its economic connection and reliance with mainland China in response to the trade barriers with other economies.

Future Directions

- Industry-Specific Analysis:
  - Focus on financial services to understand sector-specific impacts.
  - I am still struggling with the financial data cleaning works
- Excluding Mainland China (verify the hypothesis):
  - Assess trade effects with other partners by excluding trade with mainland China.
- Enhanced Robustness Checks:
  - Comparing with additional control groups (e.g., South Korea, Japan, Malaysia, Taiwan).

Thank you for listening !

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