

Economic Growth, Foreign Investor Sentiment, and Uncertainty: Evidence from Asia

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Motivation

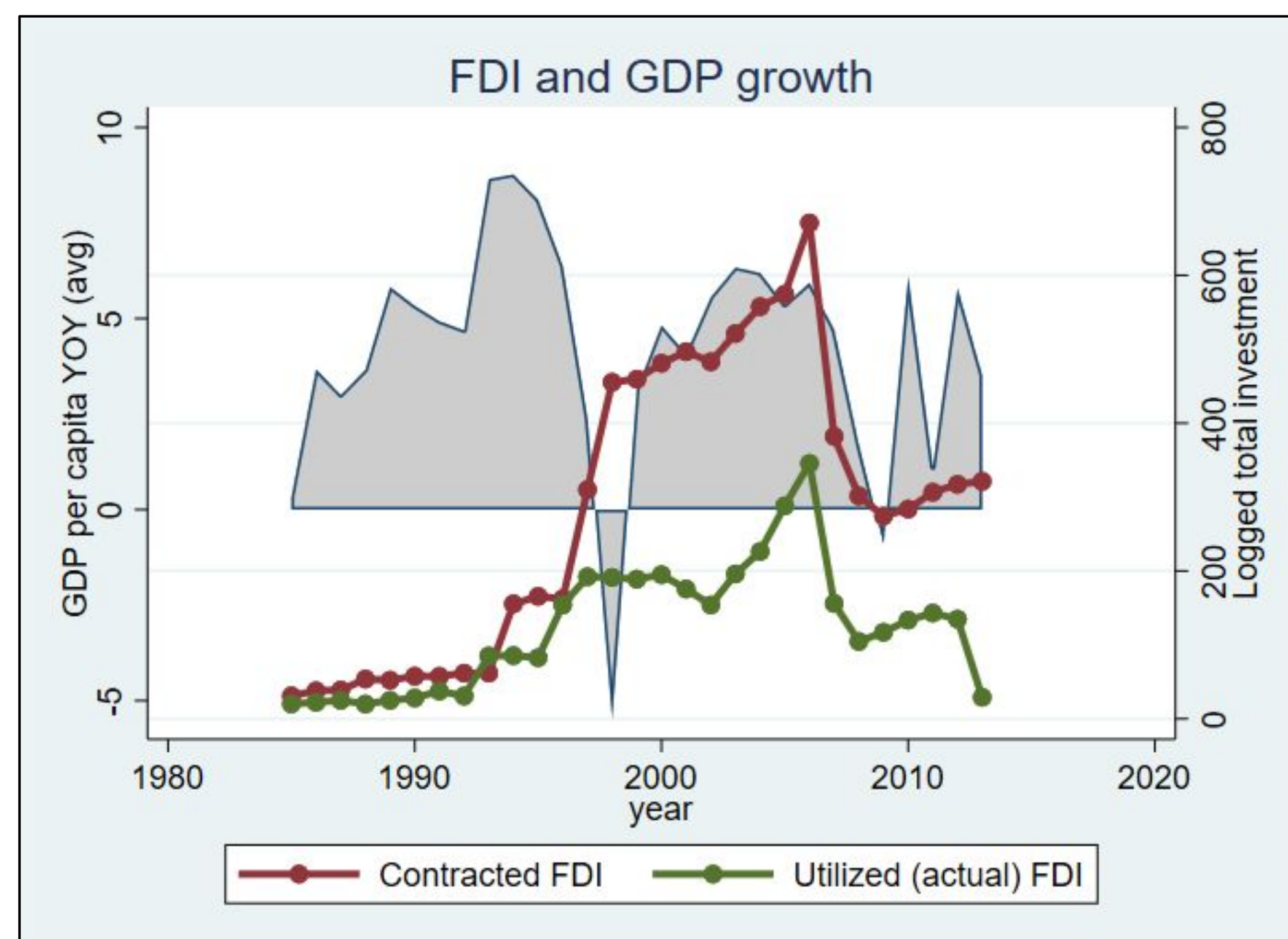
- Foreign direct investment (FDI) has been found to relate to higher levels of increased economic activity in many cases, but overall results are mixed and differ when including other factors (e.g., domestic investment, human capital)
- In this study, FDI is a measure of investor sentiment, and its relationship with economic growth and productivity is investigated
- Measurements of economic uncertainty are also included, which have been previously found to influence both FDI practices and economic growth

FDI Proxies for Investor Sentiment

- We employ three measures of FDI:
 - Contracted*, or approved, FDI
 - Utilized*, or actual, FDI
 - The *commitment ratio* (originally used in Hornstein (2011), Hornstein (2017), and Hornstein and Naknoi (2023)) describes the ratio between approved and actual FDI. It is given by

$$CR_{ct} = \frac{U_{ct}}{\frac{1}{2}(C_{ct-q} + C_t)}$$

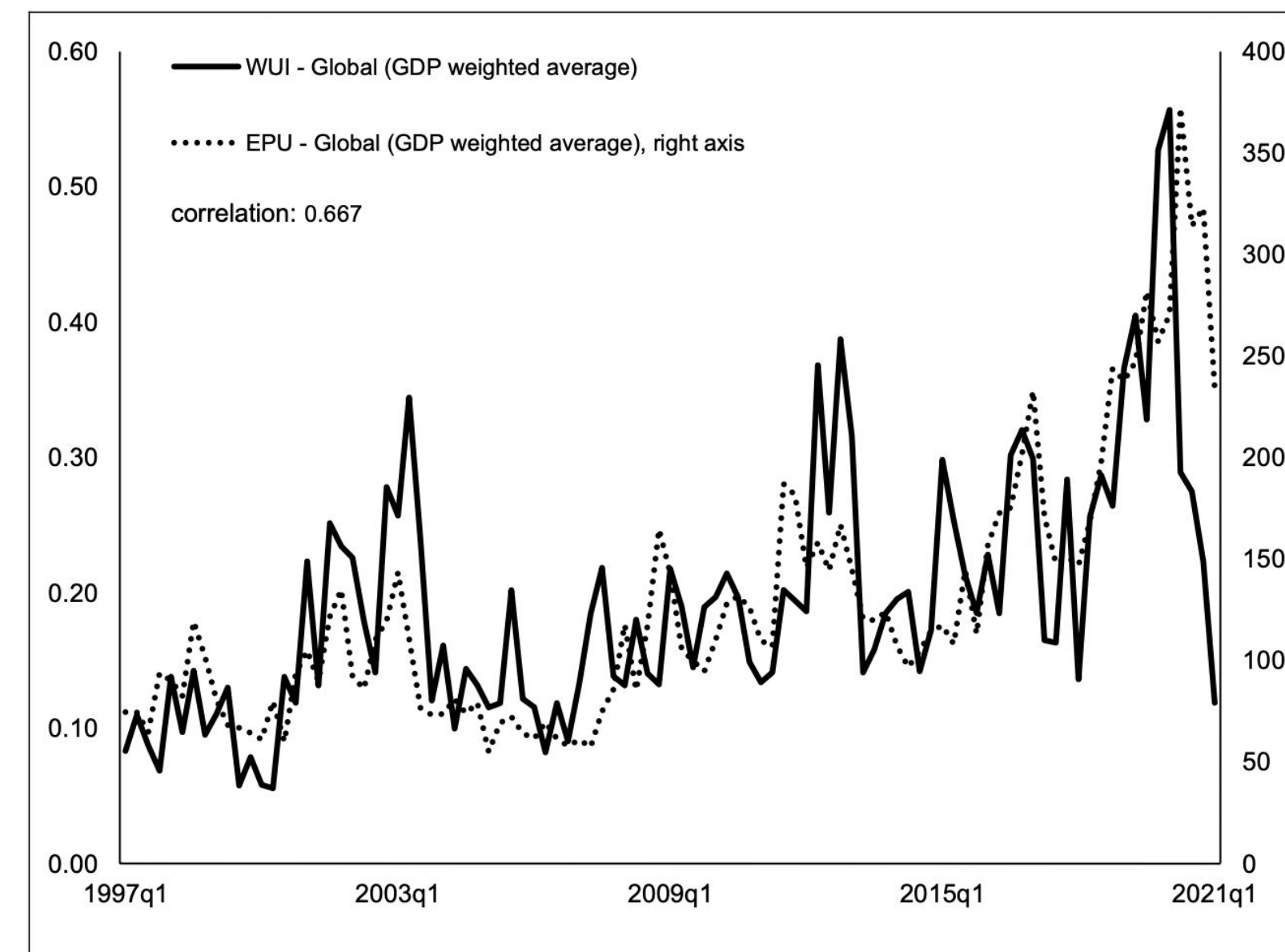
- Economic theory suggests a positive relationship between economic growth and FDI inflows, but empirical evidence is mixed
- “Sentiment”, defined as surges in optimism unrelated to future productivity, has been found to have a significant and large effect on gross capital cross-border flows.
 - We use approved FDI and the commitment ratio data as proxy measures of sentiment.



	CHN		IDN		PHL		THA	
	mean	count	mean	count	mean	count	mean	count
Contracted (promised) FDI	208.764	14	61.555	23	120.653	9	150.425	18
Utilized (actual) FDI	94.153	14	31.975	23	45.368	9	62.543	18
Commitment ratio	3.235	12	6.791	23	0.263	7	0.630	16

Uncertainty

- Research suggests that uncertainty has a negative impact on FDI inflows



This figure from Ahir, Bloom, and Furceri (2022) shows the World Uncertainty Index and Economic Policy Uncertainty over time.

	CHN		IDN		PHL		THA	
	mean	count	mean	count	mean	count	mean	count
World Uncertainty Index	0.062	14	0.222	23	0.159	9	0.185	18
GDP growth forecast (% yoy)	9.605	8	12.556	9	8.881	9	8.044	15
Real GDP per capita (% yoy)	10.198	14	4.782	23	5.268	9	3.404	18

Empirical model

- Panel data estimation of

$$Y_{dt} = \beta_1 \text{Sentiment}_{dt} + \beta_2 \text{Uncertainty}_{dt} + \beta_3 (\text{Sentiment} \times \text{Uncertainty})_{dt} + \gamma \text{Controls}_{dt} + \delta_{dt} + \varepsilon_{dt}$$

- Dependent variables include measures of GDP, productivity, and investment measured over different time horizons
- Controls include population growth, inflation, and gross fixed capital formation
- Data on contracted FDI is from CEIC, utilized is from OECD. Other data comes from World Bank, World Economic Outlook, World Uncertainty Index, CEPII, INDSTAT, and Penn World Table.

Baseline Results

- Simple regression results confirm hypothesized relationship between economic growth and FDI:

	GDP per capita yoy growth		
Contracted FDI	0.027**		
	(0.006)		
Utilized FDI		0.073***	
		(0.012)	
Commitment Ratio			-0.108
			(0.203)
Intercept	-0.514*	-1.148**	1.030
	(0.173)	(0.248)	(1.321)
Adj. R ²	0.404	0.435	0.075
N	64	64	58

Year FE included in all models; * p<0.10, ** p<0.05, *** p<0.01

Results including Uncertainty

- All analyses include year and country fixed effects with standard errors clustered by country

	Forecasted GDP growth		
Contracted FDI	0.042*		
	(0.023)		
Utilized FDI		0.102*	
		(0.053)	
Commitment Ratio			-0.961***
			(0.270)
Uncertainty	41.570***	13.978	-9.266
	(10.694)	(14.704)	(6.117)
Uncertainty * FDI Measure	-0.290***	-0.182	4.054***
	(0.075)	(.225)	(0.992)
Intercept	-137.226	79.965	-393.558*
	(205.082)	(214.211)	(195.831)
Adj. R ²	0.541	0.330	0.538
N	41	41	39

Control variables are included in all models. * p<0.10, ** p<0.05, *** p<0.01

- Results indicate a positive relationship between forecasted GDP growth and investor sentiment
 - Coefficient on the interaction term is positive, indicating that increased uncertainty reverses the effect of negative sentiment

Next Steps

- Understand mechanism behind why forecasted is significantly explained by the commitment ratio but this is not true of actual growth
 - Examine potential channels such as labor productivity, total factor productivity, and domestic investment
- Expand dataset
 - To include additional countries; limiting factor is few countries systematically disclose approved FDI
- Multiple robustness test suggested by Wesleyan faculty in recent seminar

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