

HOW FOREIGN FISCAL POLICY UNCERTAINTY SHAPES PRODUCTIVITY OF EUROPEAN COUNTRIES

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This Paper

RESEARCH QUESTIONS: Does foreign FPU faced by a country affect its productivity? What firms are affected? Through which mechanisms?

EMPIRICAL ANALYSIS: News-based measure of FPU, Firm-Level (France) + Industry-level (Europe) data

MAIN RESULTS:

- ▶ Foreign FPU negatively affects productivity and investments
- ▶ Smaller firms, as well as less-productive exporting firms, are the most affected
- ▶ Leverage amplifies the impact for small and medium-sized firms
- ▶ Cross-country (industry-level) evidence confirms the baseline effect in other European countries

MAIN CONTRIBUTION:

- ▶ We provide micro-level evidence of the effects of uncertainty on productivity, and its channels of transmission, under a shift-share IV framework
- ▶ Cross-country comparison

Literature Review

News-based Uncertainty Index (fiscal, geopol, monetary, trade...): Baker & al. (2016), Caldara & Iacoviello (2022), Caldara et al. (2019), Hong et al. (2025), Jung et al. (2021), Ahir et al. (2022)

Propagation of uncertainty shock: Alfaro et al. (2024), Fernandez-Villaverde et al. (2015), , Acemoglu et al. (2012), Carvalho et al. (2020)

Propagation of Sovereign risk: Corsetti et al. (2014), Mumtaz and Surico (2018).

Productivity growth and dispersion, trade and productivity: Bartelsman et al. (2018), Andrews et al. (2016), Choi et al. (2016), Annichiarico et al. (2013), Melitz (2003), De Loecker et al. (2013)

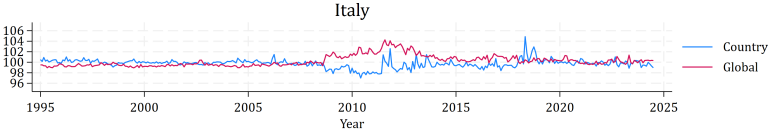
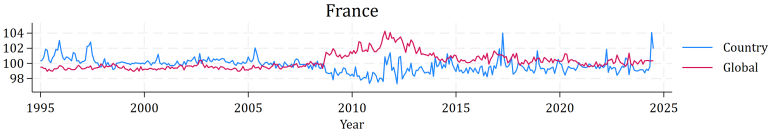
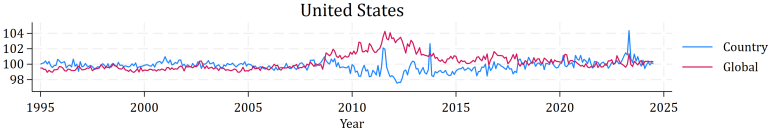
Data: Fiscal Policy Uncertainty

- ▶ Data from Hong et al. (2025): 30,000 news sources from Dow Jones Factiva
- ▶ Keywords like: *tax, government expenditure, public debt, stimulus congress, parliament, unpredictable* plus a country identifier in the title, snippet, main paragraph
- ▶ Validated using human audits and LLM
- ▶ *Idiosyncratic* component of country FPU:

$$FPU_{c,t} = \alpha_c + \beta_c \cdot PC + \epsilon_c$$

* ϵ_c is the country idiosyncratic FPU

Fiscal Policy Uncertainty



Data

FRANCE FIRM-LEVEL DATA

- ▶ Business Registers + Administrative Balance sheets + Custom data
- ▶ Collected and harmonized through the Micro Data Infrastructure (MDI) platform

UN COMTRADE EXPORT LINKAGES

- ▶ Country-partner-item-flow level
- ▶ Aggregated at industry level
- ▶ For each industry we observe how much it exports and where

COMPNET INDUSTRY MICRO-AGGREGATED DATA

- ▶ Micro-aggregated indicators of productivity, firm-dynamics, trade
- ▶ For each indicators we observe the moments of the distribution
- ▶ Coverage includes 15 European countries

Empirical Estimation

Reduced-form Shift Share Instrument at Industry-level (Borusyak et al. (2022)):

$$WFPU_{s,t} = \sum_p^P \underbrace{FPU_{p,t}}_{\text{Shift}} \cdot \underbrace{\frac{x_{s,p,0}}{X_{s,0}}}_{\text{Share}}$$

We estimate the following equation:

$$y_{i,s,t} = \beta WFPU_{s,t-1} + \gamma Z_{i,t-1} + \delta(WFPU_{s,t-1} \times Z_{i,t-1}) + \Gamma X_{i,t-1} + \psi_{s,t} + \epsilon_{i,t}$$

Share are the averages export shares between 1999-2001

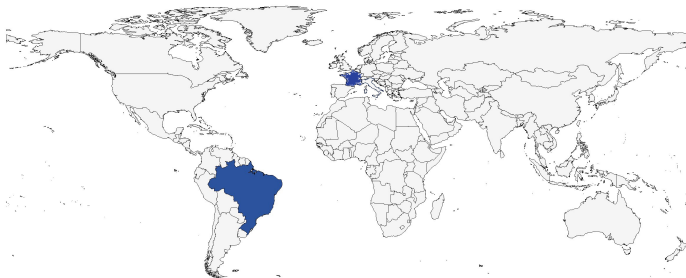
Outcome variables: Labor Productivity, Investment/Turnover

Controls: capital intensity, firm-number of employees

Fixed effects: year-sector

Standard errors clustered at sector-year level

Transmission Mechanism



**Fiscal policy
shock in Brazil**



**French exporters
learn about it**



Investment falls



Productivity falls

FIRM-LEVEL RESULTS

Higher Foreign FPU Decreases Labor Productivity

Dep. Variable:	Labor Productivity — $\log(VA/L)$		
<i>WFPU</i>	-0.188** (0.082)	-0.150* (0.086)	-0.147* (0.088)
<i>WFPU</i> × <i>ExportShare</i>			-0.075 (0.109)
<i>WFPU</i> × <i>Leverage</i>		-0.194*** (0.072)	-0.115 (0.081)
<i>WFPU</i> × <i>Leverage</i> × <i>ExportShare</i>			-0.431* (0.260)
<i>ExportShare</i>			7.667 (10.894)
<i>Leverage</i>		19.090*** (7.249)	11.134 (8.065)
<i>Leverage</i> × <i>ExportShare</i>			43.121* (26.032)
<i>Employees</i>	0.092***	0.082***	0.070***
<i>Capital Intensity</i>	0.113***	0.142***	0.138***
Industry × Year FE	Yes	Yes	Yes
Observations	336,547	317,204	316,596
R^2	0.0966	0.1224	0.1310

Leverage Amplifies the Result ...

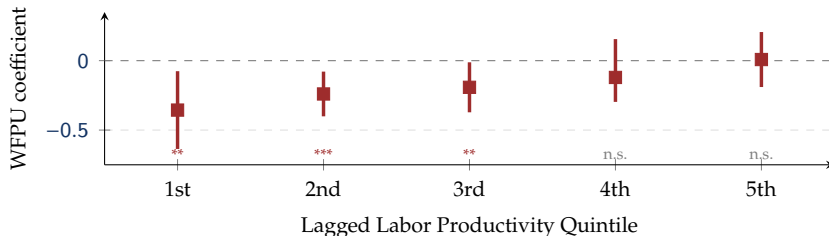
Dep. Variable:	Labor Productivity — log(VA/L)		
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... Especially among Firms with a Higher Export Share

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...and among them, lower productivity firms

Dep. Variable:	Labor Productivity Quintiles — WFPU, no leverage interaction				
	(1st)	(2nd)	(3rd)	(4th)	(5th)
<i>WFPU</i>	-0.356**	-0.240***	-0.192**	-0.121	0.008
	(0.143)	(0.082)	(0.092)	(0.090)	(0.101)
<i>Employees</i>	0.455***	0.210***	0.194***	0.244***	0.737***
<i>Capital Intensity</i>	0.046***	0.014***	0.017***	0.020***	0.064***
Industry $\times$ Year FE	Yes	Yes	Yes	Yes	Yes
Observations	53,809	61,887	65,768	68,136	69,740
R^2	0.0345	0.0155	0.0214	0.0484	0.5200



Smaller Firms Bear the Productivity Burden

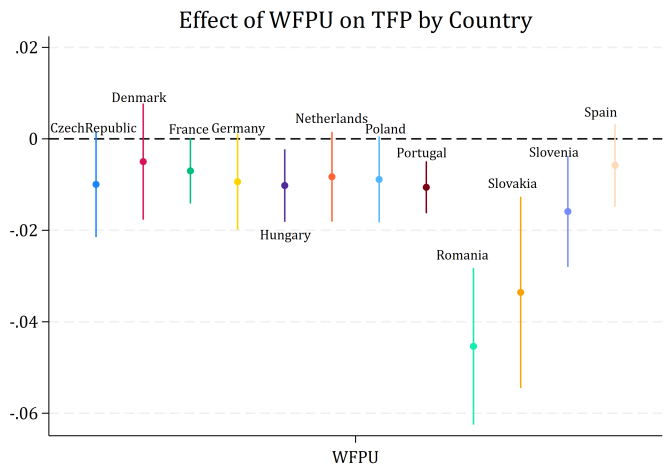
Dep. Variable:	Labor Productivity — $\log(\text{VA}/L)$		
	20-49 Employees (1)	50-249 Employees (2)	>250 Employees (3)
<i>WFPU</i>	-0.203** (0.097)	-0.068 (0.084)	-0.037 (0.099)
<i>WFPU</i> $\times$ <i>Leverage</i>	-0.266*** (0.088)	-0.244*** (0.090)	0.064 (0.160)
<i>Leverage</i>	26.203*** (8.836)	24.131*** (9.025)	-6.734 (15.973)
<i>Employees</i>	0.196***	0.073***	0.151***
<i>Capital Intensity</i>	0.167***	0.121***	0.103***
Industry $\times$ Year FE	Yes	Yes	Yes
Observations	183,214	106,466	27,524
R^2	0.1206	0.0819	0.1207

Investment: Amplified by Leverage and Export Share

Dep. Variable:		Investment Rate — log(Investment/Turnover)	
<i>WFPU</i>	-0.545** (0.211)	-0.594*** (0.210)	-0.620*** (0.215)
<i>WFPU × ExportShare</i>			0.218 (0.230)
<i>WFPU × Leverage</i>		0.005 (0.347)	0.230 (0.384)
<i>WFPU × Leverage × ExportShare</i>			-1.440* (0.841)
<i>ExportShare</i>			-21.627 (22.982)
<i>Leverage</i>		-0.590 (34.674)	-23.158 (38.465)
<i>Leverage × ExportShare</i>			144.108* (84.178)
<i>Employees</i>	1.034***	1.001***	0.990***
<i>Capital Intensity</i>	0.710***	0.891***	0.896***
Industry × Year FE	Yes	Yes	Yes
Observations	268,638	253,411	252,885
<i>R</i> ²	0.2267	0.2614	0.2642

CROSS-COUNTRY RESULTS

The Negative Effect on Productivity Is Common across Countries



Taking Stock

- ▶ Foreign FPU negatively affects productivity and investments
- ▶ Smaller firms, as well as less-productive exporting firms, are the most affected
- ▶ Leverage amplifies the impact for small and medium-sized firms
- ▶ Cross-country (industry-level) evidence confirms the baseline effect in other European countries