



SFB/Transregio 266

ACCOUNTING FOR
TRANSPARENCY

Firm-level tariff exposure and uncertainty: Measurement and effects

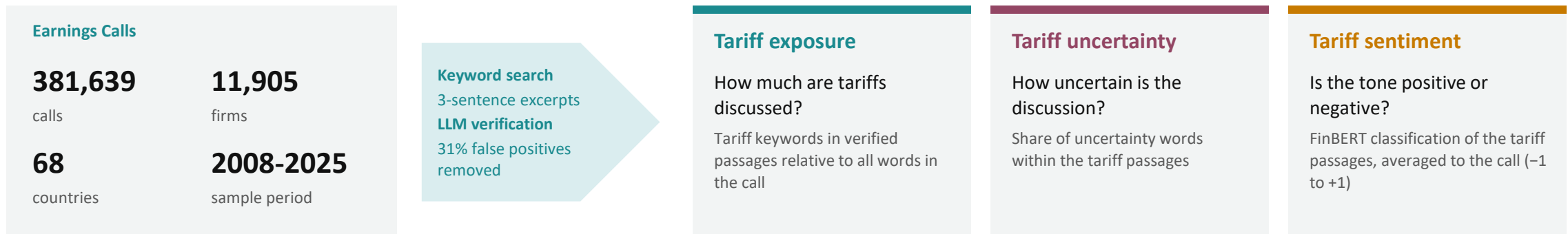
(Alexander Hillert, **Luis Enrique Kaiser**, and Julia Rupp)

Discussant: Henning Giese, Paderborn University | KU Research Institute for Taxation

17/09/2026 | XXV. Symposium zur ökonomischen Analyse der Unternehmung 2026, Mainz

SUMMARY

How can tariff exposure be measured at the firm level, and does it matter for stock prices and real decisions?



Three main findings

- 1 Exposed firms lose value when tariffs rise, and when they fall**
-0.21 pp per SD of exposure, -0.06 pp per SD of uncertainty, within event x sector x country, U.S. tariff increases.
- 2 Markets price exposure once tariffs change, not when firms talk about it**
No abnormal returns around the earnings calls that update the measures; the reaction comes on tariff-event days, and whether a firm is exposed at all matters more than how much.
- 3 Exposed firms invest less and grow more slowly in the following year**
-0.9 pp investment share and -0.5 pp sales growth per SD of exposure; employment unchanged; no real effects of uncertainty (cost shock)

Ab 09:00 **Anmeldung** Foyer

09:15–09:30 **Eröffnung des Symposiums** HS VII

A. Rohlfing-Bastian

Vorsitzende der GEABA

Professur für Rechnungswesen, insb. Management Accounting

Goethe-Universität Frankfurt

C. Koch, S. Kronenberger

Professur für Corporate Governance & Wirtschaftsprüfung

Professur für Accounting

Johannes Gutenberg-Universität Mainz

T. Lüdke

Partner Audit, Deloitte GmbH

09:30–12:00 **Parallel Sessions A**

A1: The Power of Words

HS I

Diskussionsleitung: P. Welzel

**L. E. Kaiser, A. Hillert & J.
Rupp**

**Firm-level tariff exposure and uncertainty:
Measurement and effects**

Korreferat: H. Giese

J. Rößner, C. Hofmann &
N. Schwaiger

Consistency of crowdsourced employer reviews and
hiring efficiency

Korreferat: P. Welzel

WHAT I LIKED 😊

Timely and policy-relevant research question!

- Tariffs are the tax shock of 2025, and there is no firm-level measure of who is hit
- Separates the level of exposure from the uncertainty about it

Extensive dataset and careful measurement

- 381,639 calls, 11,905 firms, 68 countries; keyword hits verified by an LLM
- Checking for measurement error: 31% false positives, 1,000 sentences hand-checked

Extensive validation

- Capital market test among 18 tariff events in both directions
- Real effects tests

Clearly written, easy to follow

- Clear takeaway: **a firm-level, time-varying, international measure of tariff exposure that others can use**

MY APPROACH TO THE RESEARCH QUESTION

Replicating your measure using 10-K and 10-Q filings of the largest U.S. firms (2016-2025)

SEC EDGAR

18,139

10-K and 10-Q filings

2016-2025

37 filings per firm

493

firms, largest by revenue

23,528

tariff excerpts

Same construction

keyword list of Table A.5

3-sentence excerpts

uncertainty dictionary

rule-based screen + hand

check instead of the LLM

Measures

■ **Tariff exposure**

■ **Tariff uncertainty**

■ **Tariff sentiment**

Additional data sources

Daily prices abnormal returns, same event days

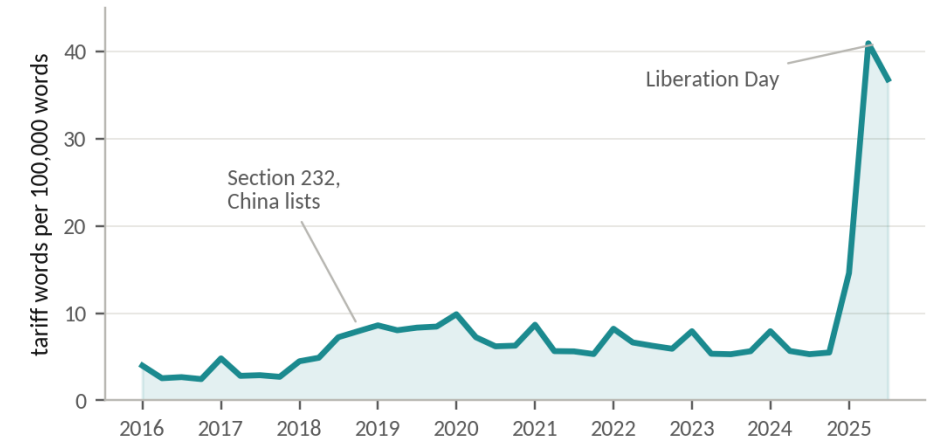
XBRL statements margins, cost of goods sold, ETR

Placebo event dates 400 draws

Summary statistics

	Earnings calls This paper	10-K / 10-Q filings This discussion
Documents	381,639	18,139
Firms	11,905 (68 countries)	493 (U.S. only)
Documents with a tariff passage	≈ 7 %	50 %
Tariff exposure, mean (% of words)	0.012	0.008
... among exposed documents	0.161	0.016
Keyword false positives	31 % (LLM)	34 % (Claude)

Tariff exposure in filings by quarter



Review of Manuscript “Firm-level tariff exposure and uncertainty: Measurement and effects” Hillert, Kaiser and Rupp (2026)

Summary

The paper constructs three text-based measures from 381,639 earnings calls of 11,905 firms in 68 countries between 2008 and 2025: how much a firm talks about tariffs (exposure), how uncertain that discussion is (uncertainty), and whether its tone is positive or negative (sentiment). The paper first provides descriptive validation of these measures and then studies stock-market reactions around nine tariff-increasing and nine tariff-decreasing U.S. announcements. Finally, it relates the measures to firms’ subsequent investment, employment, and sales growth.

The measurement approach is, in my view, the main contribution of the paper. Relative to Hassan et al. (2019, 2024), the authors substantially broaden the setting, separate tariff exposure from uncertainty, and use an LLM-based screen to remove false-positive keyword hits, which account for 31% of the initial sample. The resulting international firm-level panel could be useful for a range of questions on trade policy, and I can easily see the measures being used in subsequent work once they are released.

My main comments concern what the measures capture, how convincingly they are validated, and how they should be interpreted in the subsequent analyses. In particular, I think the paper needs to establish more clearly what tariff-related discussion in an earnings call captures, provide stronger validation of that construct, and be somewhat more careful in the interpretation of both the event-study and real-effects results. Addressing these issues would, in my view, also help sharpen the paper around what I see as its main contribution: the measurement.

Major Comments

1. Interpretation and construct validity of the tariff measures

My first concern is what exactly the exposure measure captures. The paper interprets the frequency of tariff-related discussion as firm-level tariff exposure and motivates this by arguing that, if tariffs are not discussed by either managers or analysts, they are not among the important economic factors for the firm at that point in time. I find this interpretation too strong. A firm may be silent about tariffs because it is genuinely not exposed, but also because its exposure is well known and has not changed, because no analyst asks about it, or because management prefers not to discuss it. These cases all generate the same zero in the current measure.

This matters because zeros make up a large part of the variation in the measure. The descriptive statistics suggest that most calls contain no tariff discussion, and the regressions also indicate that the extensive margin is important. I therefore think the paper should spend more time on what a zero means before interpreting it as the absence of exposure.

The structure of the earnings calls offers one way of learning more about this. I would find it informative to distinguish tariff discussions initiated by management from those initiated by analysts and, relatedly, prepared remarks from the Q&A section. A tariff discussion voluntarily introduced by management seems conceptually different from one elicited through an analyst

MAJOR COMMENT 1

10% (27%) of all earnings call mention tariffs. But what does not talking mean?

		Tariff talk in the call	
		yes	no
Economically exposed	yes	Measured exposure What the measure is built to capture	False zero known and not news no analyst asked management prefers not to talk
	no	Attention (false positive) analysts ask anyway “tariff” as a regulated price (next slide)	True zero not exposed and silent

What sorts the off-diagonal cells: who raises the topic, and where in the call (prepared remarks vs. Q&A).

Firm-specific or sector-specific? Two numbers from the filings

Fixed-effects decomposition (sector x quarter FE):



Correlation of exposure and uncertainty

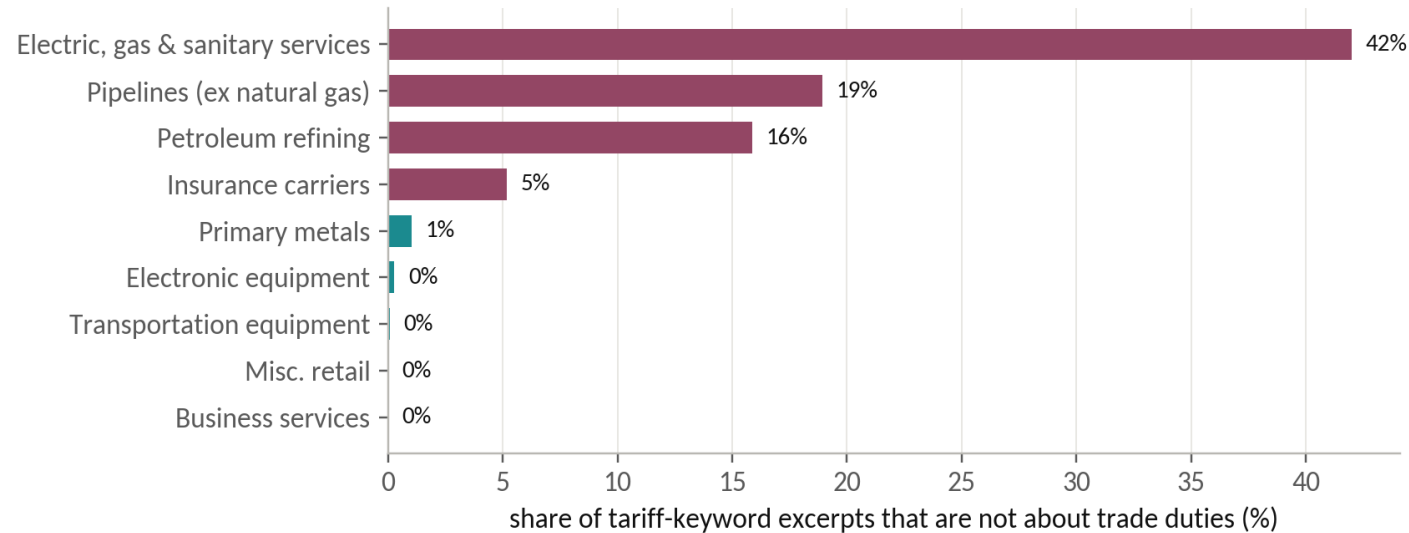


In your paper

Regress each measure on country x sector x quarter fixed effects and report R^2 . $1 - R^2$ is the firm-level share you are after.

MAJOR COMMENT 2

Where do the false positives come from, and does it matter?



“Tariff” has a different meaning in these sectors: a regulated price (utility rates, pipeline fees), not a trade duty.

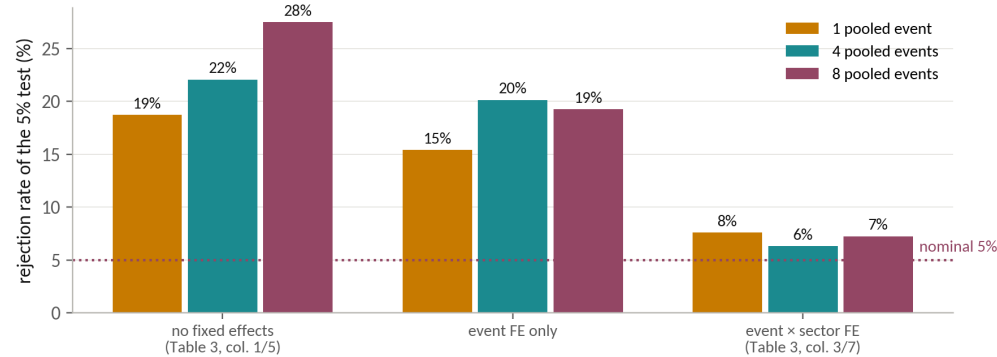
In your paper

- **Show where the 57,109 rejected excerpts come from:** sector and period.
- **Use the 1,000 hand-coded sentences as a validation sample:** error rates by sector and period (Ludwig, Mullainathan, and Rambachan 2025).
- **Benchmark the measure against something outside the text:** import intensity, foreign sales, customs data.

MAJOR COMMENT 3

Nine event dates and standard errors clustered by firm: What is the true size of the 5% test?

Rejection rate of the 5% test on placebo event dates (filings)



Critical value: 5% test

no FE $|t| = 3.39$

event FE $|t| = 2.86$

event $\times$ sector $|t| = 2.10$

two-way clustering by firm and event, nine events: 14%

In the calls

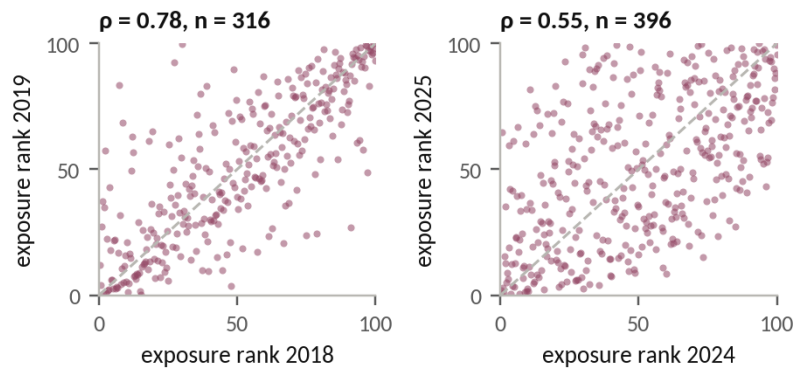
- The same placebo on non-event trading days
- Use only the fixed-effects columns
- Test the asymmetry directly: one stacked regression of increases and decreases with a direction interaction.

On placebo dates the 5% test rejects one in four without fixed effects, one in twenty with them. The fixed effects do the work, not the clustering. The paper's uncertainty coefficient has $t = 2.07$; against the placebo threshold of 2.10 it is no longer significant at 5%, the exposure coefficient ($t = 6$) is.

MAJOR COMMENT 4

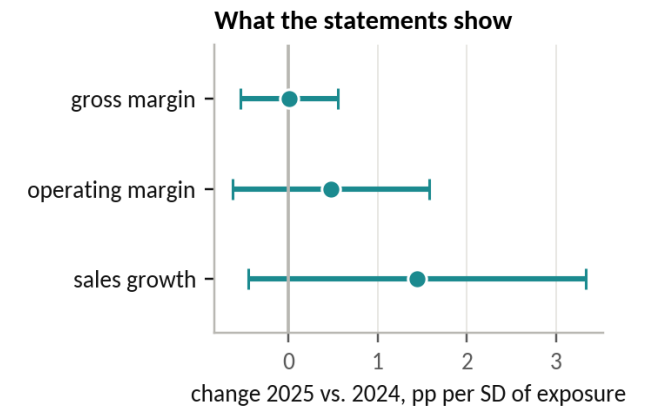
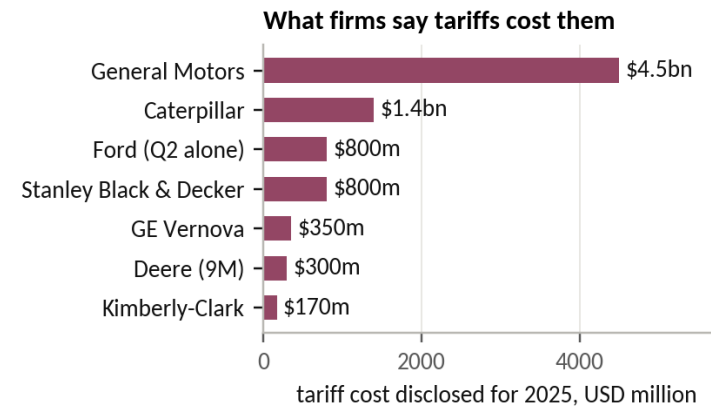
Exposed firms invest less: A response to tariffs, or just different kinds of firms?

Exposure is a firm characteristic (filings)



Exposure is a firm characteristic: The investment regression has no firm fixed effects, so it compares types of firms, not a firm before and after.

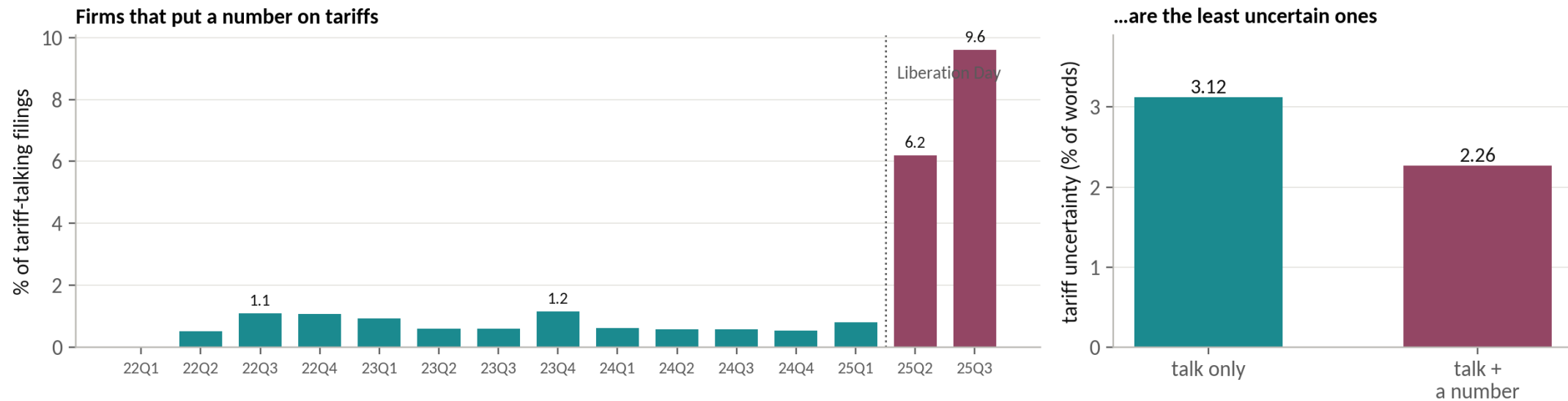
Is it a cost shock? What firms say, and what the statements show (2025)



In your paper: Include firm fixed effects and standard investment controls. Use gross margin and cost of goods sold as a direct test of the cost shock.

FUTURE AVENUES

10% of filings put a number to tariff, and they are the least uncertain firms



Firms that put a number on their tariff cost use about a quarter fewer uncertainty words when they talk about tariffs than firms that only talk.

FUTURE AVENUES

Exposure, sentiment, uncertainty, and quantification

Exposure

how much are tariffs talked about?

your measure

Sentiment

is the effect good or bad?

your measure

Uncertainty

how unsure is the firm about the effect?

your measure

Quantification

does the firm yet know the number?

new

In your paper

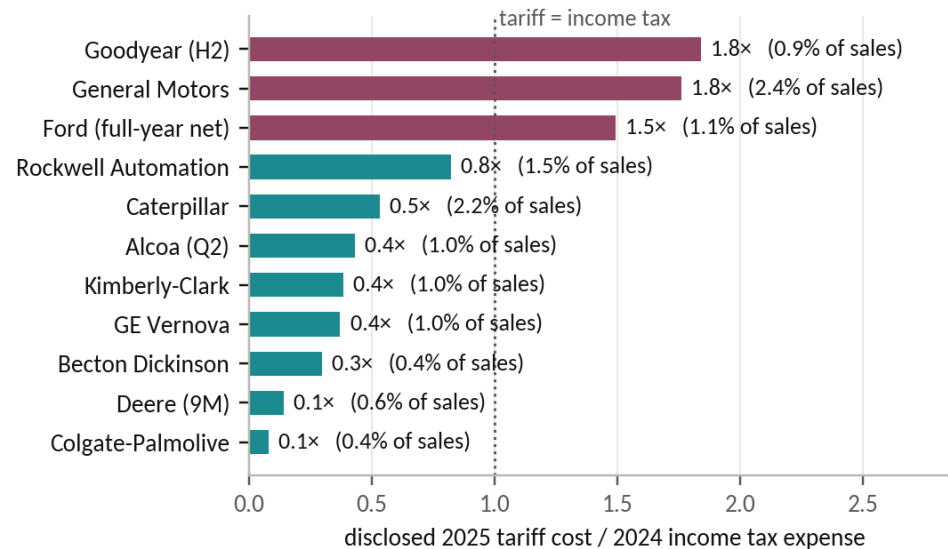
- **Validate the uncertainty measure using firms' quantification:** you can also try to cross-check accuracy using following years. Managers might give numbers far more often in calls than in filings.
- **Use (scaled) quantification as an additional variable for the real effects tests**
- **Track quantification by management and questions of analysts over time:** Does a major event such as the Liberation Day chang behavior?

Firms that quantify in 2025: General Motors \$4.0-5.0bn, Caterpillar \$1.3-1.5bn, Ford \$800m in Q2, Stanley Black & Decker \$800m, Deere \$300m, Kimberly-Clark \$170m, Becton Dickinson \$90m.

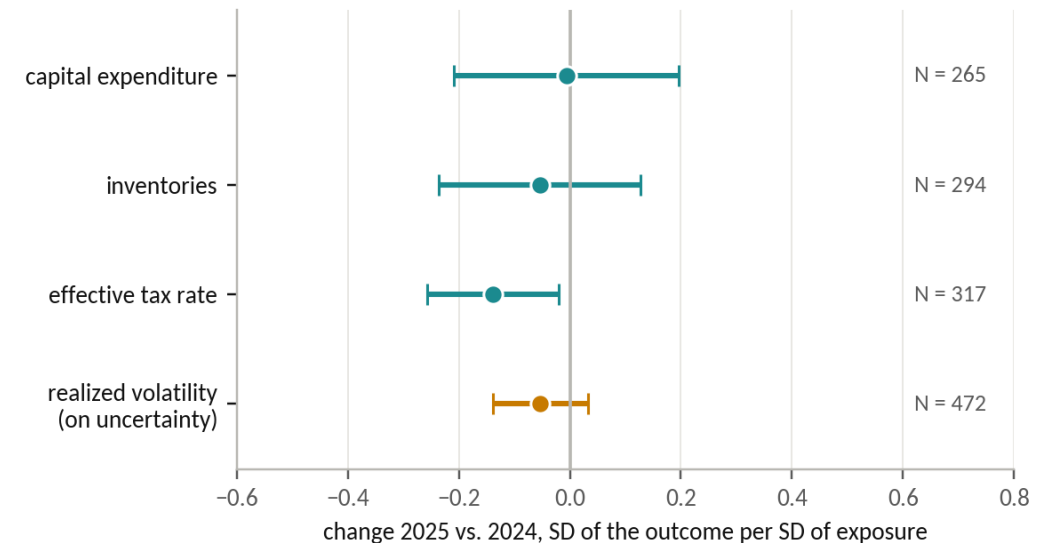
FUTURE AVENUES

Tariffs are taxes: Where does the bill show up?

Comparing tariff and income tax (firms that put a number on it in 2025)



Other outcomes, 2025 vs. 2024 within firm (filings)



For the paper: Put the quantified tariff cost next to income tax expense as an alternative tax-burden measure that ETR-based measure will not pick up.

Good luck with your paper!