

Declining Concentration, Granular Shocks, and Fiscal Risk: Evidence from Israel

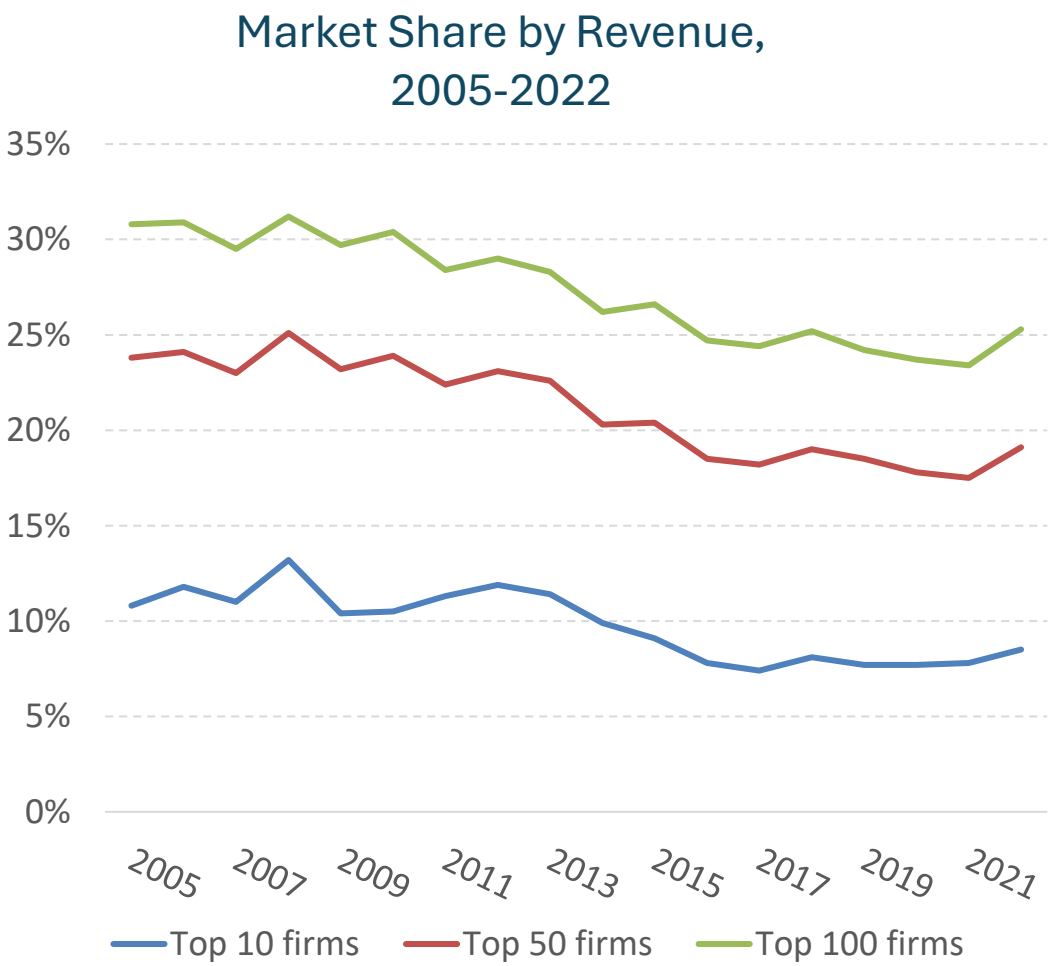
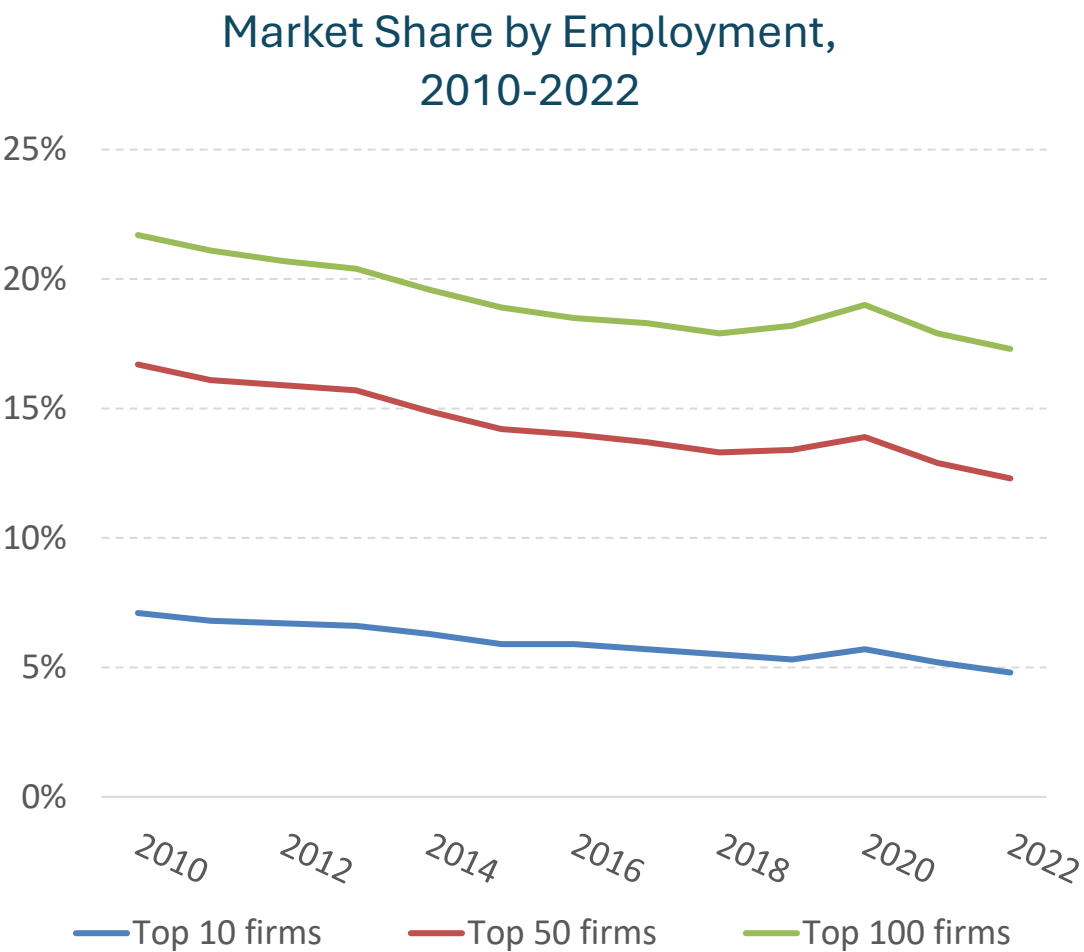
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This paper reflects the views of the authors alone and does not represent the official position of the Ministry of Finance.

Motivation: Revenue and Employment Shares of Top Firms Declined

The largest firms account for a smaller share of revenue and employment

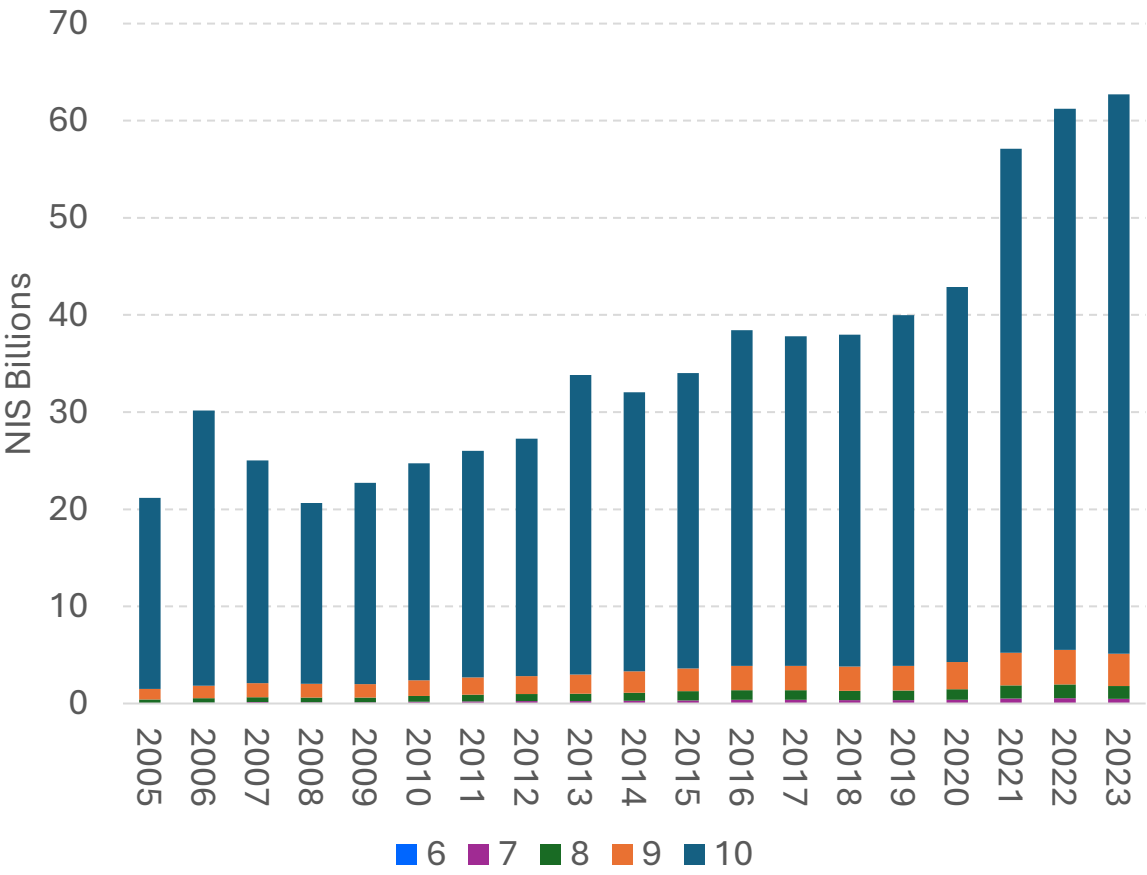


Source: Brand , Ifergane and Peterfreund (2025)

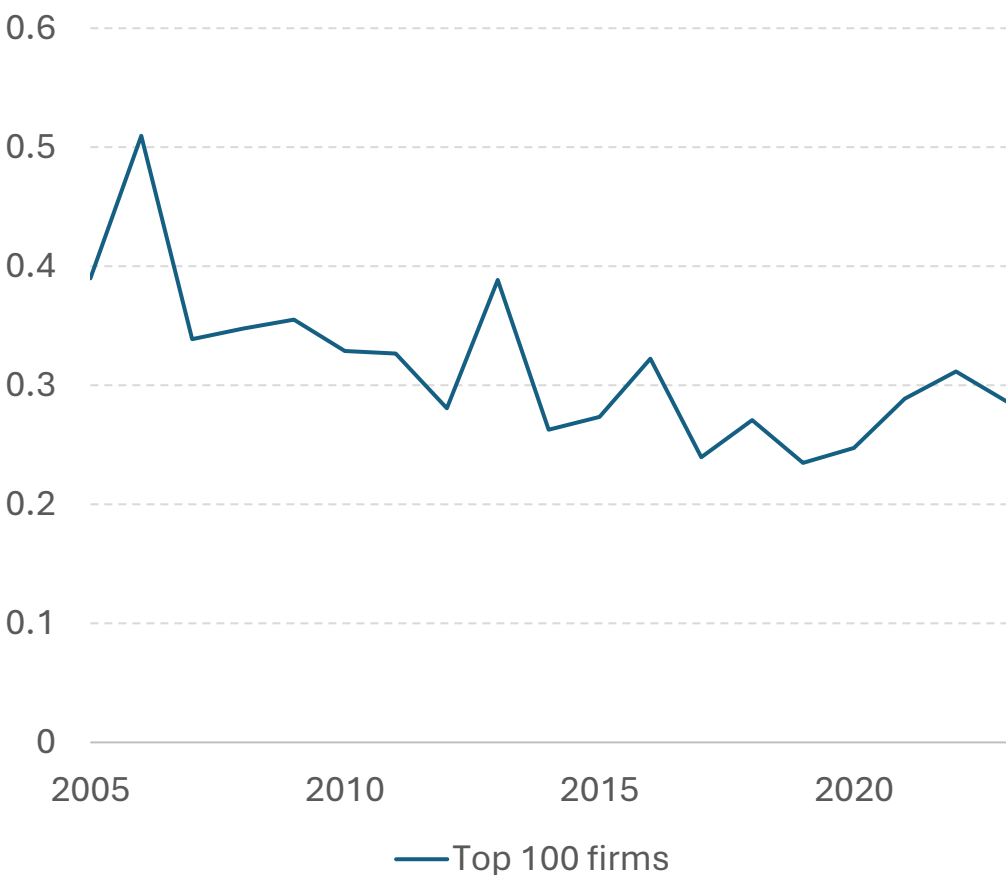
Economic Activity Remains Uneven, Resulting in a Concentrated Corporate Tax Base

Distribution of corporate tax payments

Contribution to Corporate Tax Base By Revenue
Deciles, 2005-2023



Share In Corporate Tax by Revenue
Ranking, 2005-2023



Research outline

- Research question: Do idiosyncratic shocks to dominant firms spill over to aggregate activity, beyond the firms themselves?
- Outline for today:
 - The GIV Framework: Granular Instrumental Variables Explained
 - Data and Market Leaders: Key Trends
 - Empirical Strategy: Model Specification and Core Findings

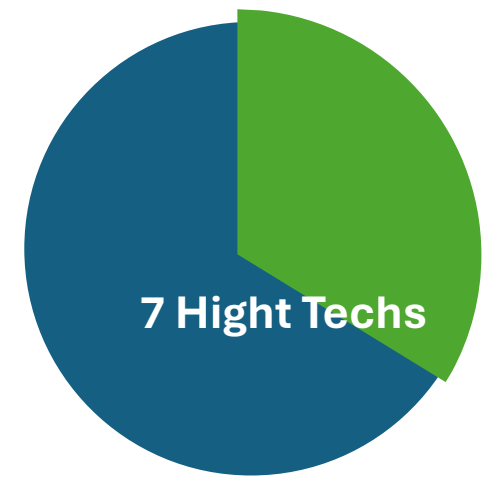
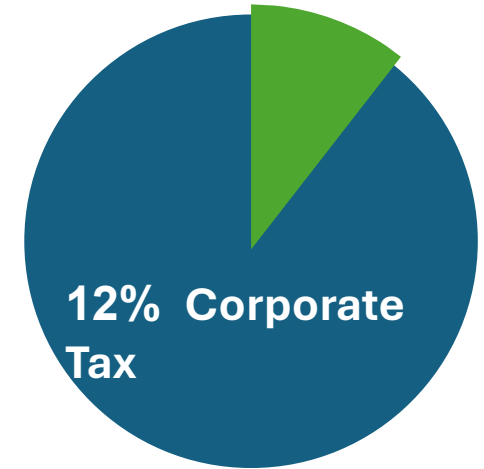
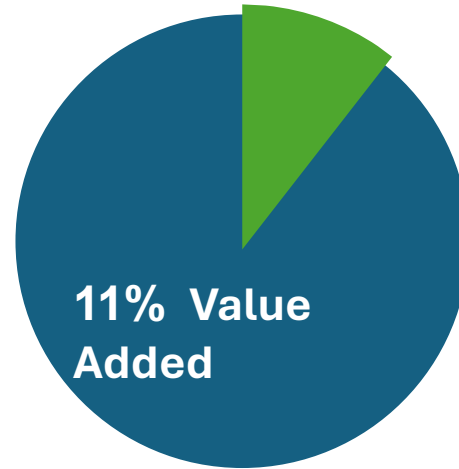
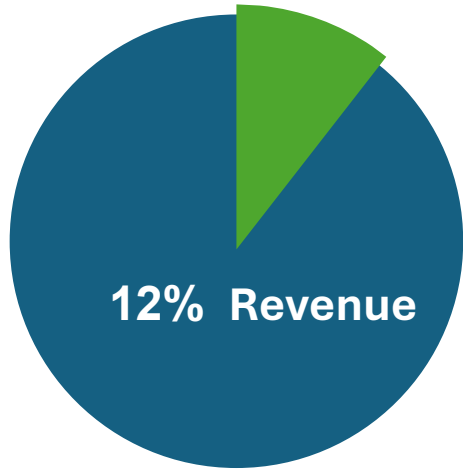
Empirical framework – Granular Instrumental Variable

- Granular instrumental variables framework of Gabaix and Koijen (2024)
 - Setting: Fat-tailed firm-size distribution.
 - IV: A size-weighted average of shocks to dominant firms.
 - Relevance: Shocks to dominant firms must portray sufficient variation.
 - Exclusion restriction: The instrument should affect the outcomes of interest only through shocks to dominant firms, and not through other macro conditions.

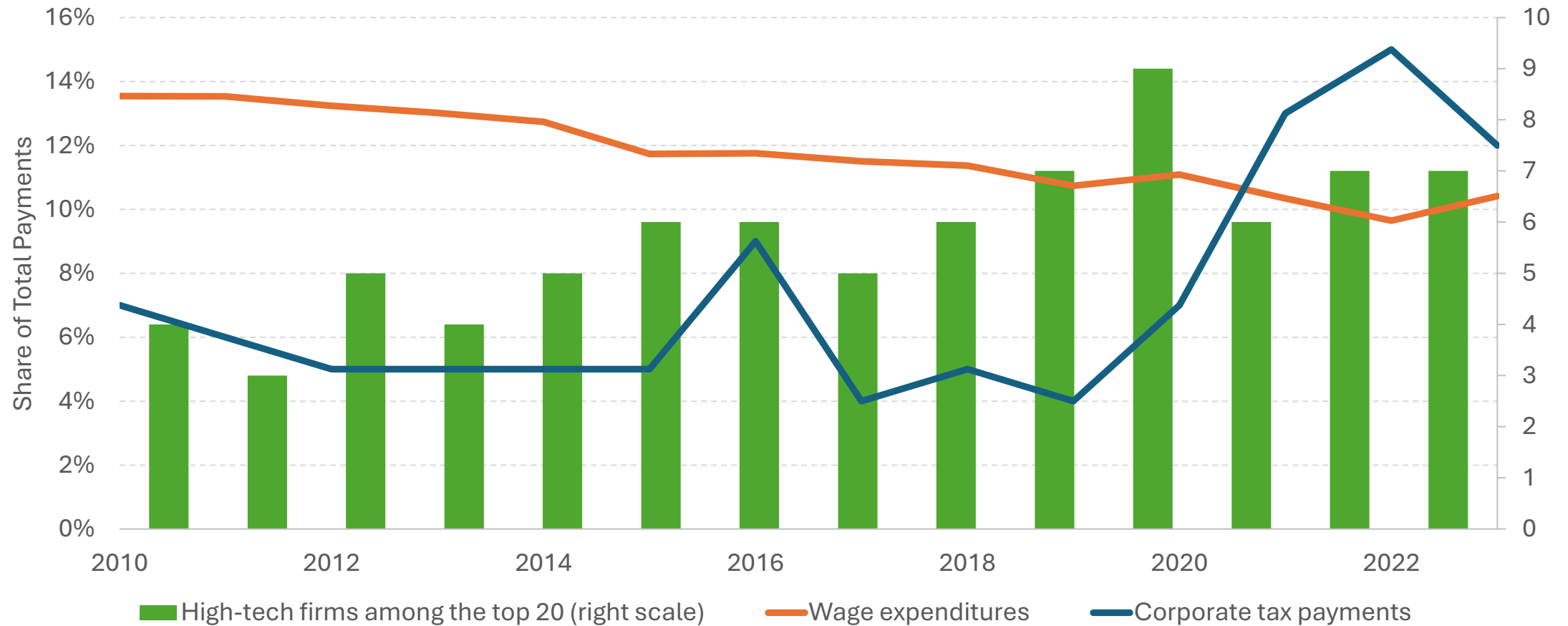
Data

- Administrative microdata from the Israel Tax Authority (ITA)
 - Annual corporate tax returns for 2005–2023 period.
 - Individual-level salaried wage reports for 2010–2023 period.
 - Excluding banks.
- The GIV
 - 20 largest (by revenue) firms selected each year – sufficient number to satisfy the relevance condition.

The Top 20 Firms in 2023



The Top 20 Firms over Time

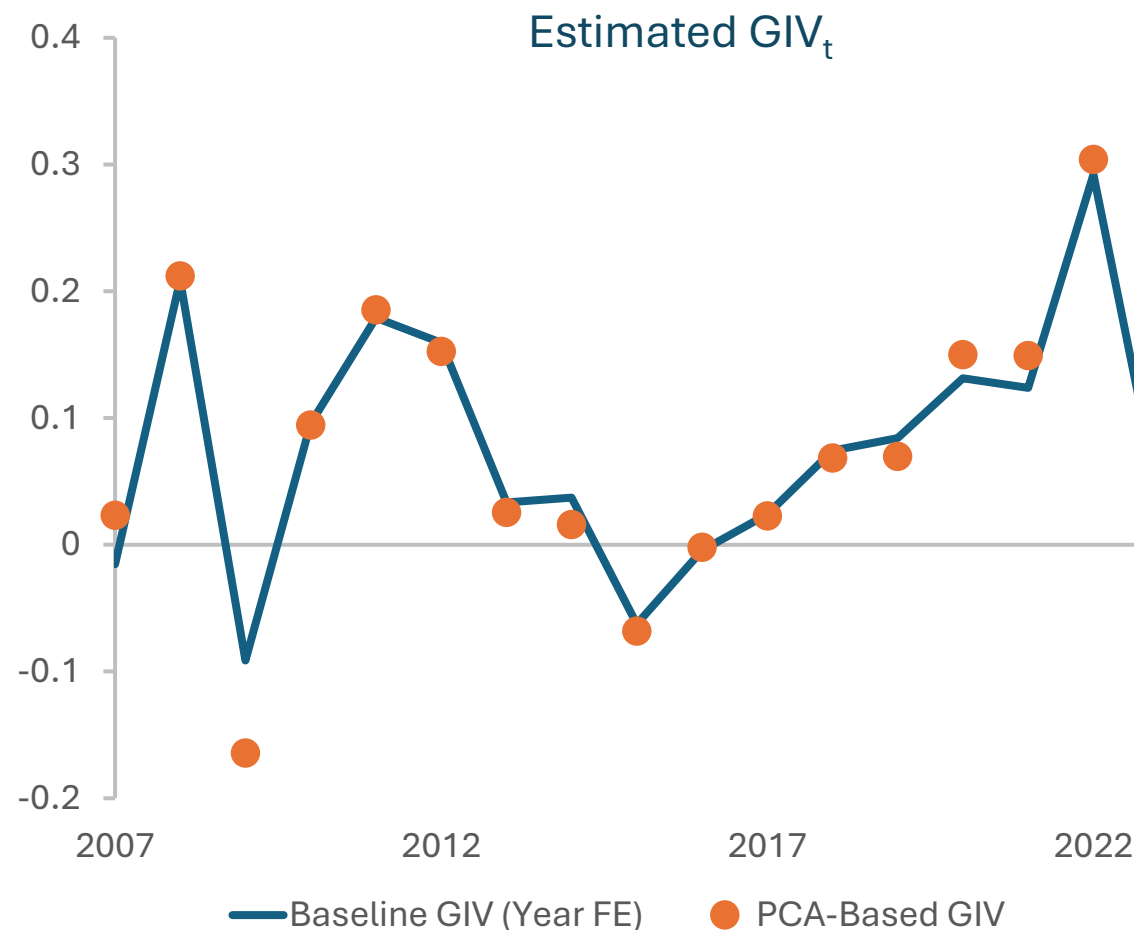


Stage 1: Extracting Idiosyncratic Shocks and Building the GIV

$$(1) \underbrace{\Delta r_{j,t}}_{\text{Revenue}} = \underbrace{\alpha_j}_{\text{Firm FE}} + \underbrace{\delta_t}_{\text{Time FE/PCA}} + \underbrace{\gamma' X_{j,t}}_{\text{Controls}} + \underbrace{\hat{\varepsilon}_{j,t}}_{\text{Idiosyncratic shocks}}$$

Aggregate weighted firm-level idiosyncratic shocks and subtract their unweighted sum:

$$(2) G_t = \underbrace{\sum_{j=1}^K s_{j,t-1} \hat{\varepsilon}_{j,t}}_{\text{Weighted}} - \underbrace{\sum_{j=1}^K \hat{\varepsilon}_{j,t} \bar{s}_{t-1}}_{\text{Unweighted}}$$



Stage 2: Estimating the Effect of Dominant Firms on the Broader Economy

$$(3) \quad \underbrace{\ln y_{j,t+h} - \ln y_{j,t-1}}_{\text{Cumulative effect over the horizon } h} = \underbrace{\alpha_j}_{\substack{\text{Firm} \\ \text{FE}}} + \underbrace{\beta_h G_t}_{\substack{\text{Spillover} \\ \text{effect}}} + \underbrace{\Gamma'_h X_{j,t-1}}_{\text{Controls}} + \mu_{j,t+h}, h \in \{0,1\}.$$

- We consider several result outcomes - y_j :
 - Value added
 - Wage payments
 - Reported profits
 - Corporate Tax paid

Results: Pass Through to Value Added and Wages among Non Dominant Firms

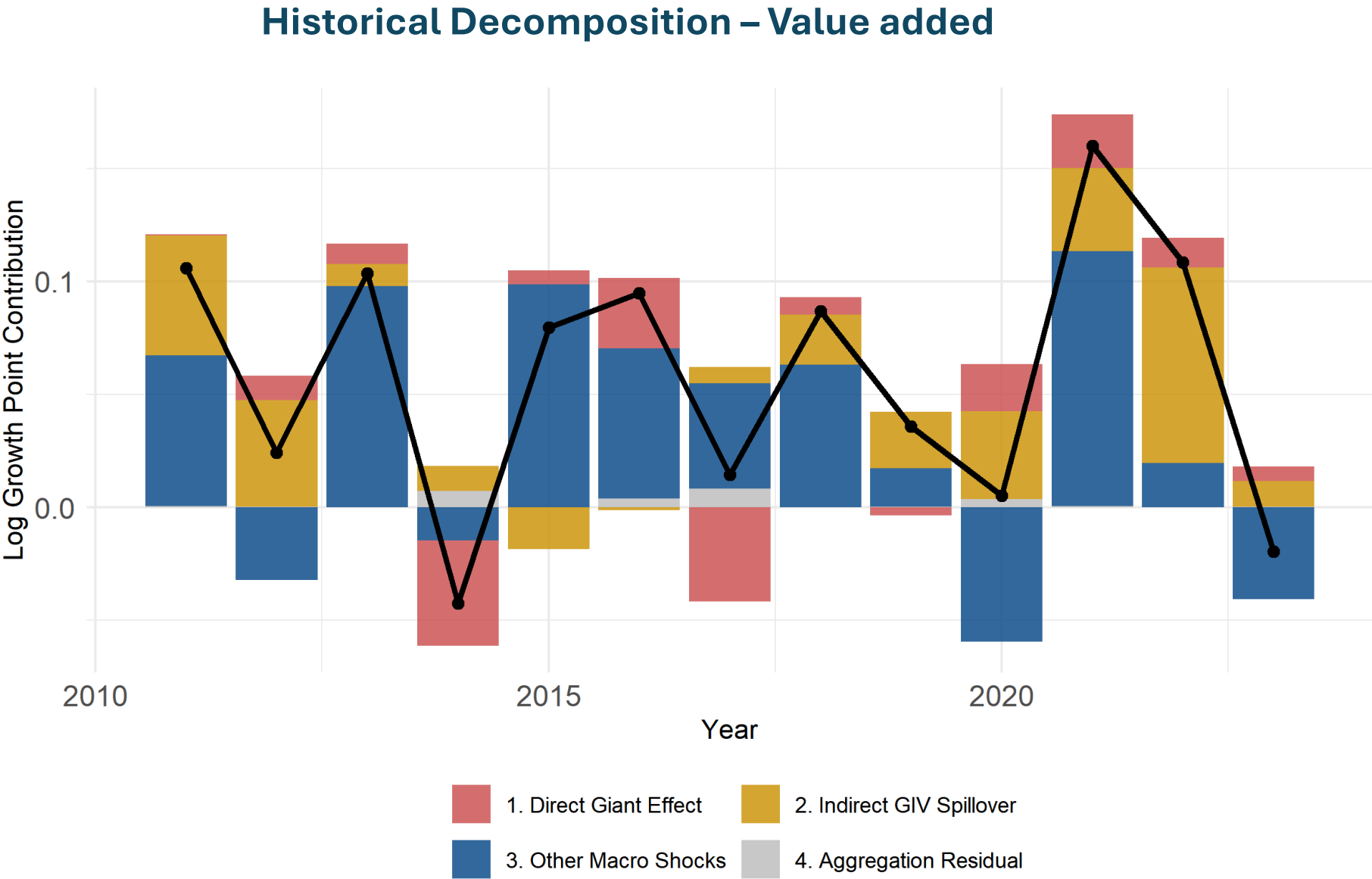
Effect on the average firm
(Equal-Weighted Estimates)

	Value Added		Wages	
	(h=0)	(h=1)	(h=0)	(h=1)
Estimate	0.08	0.21***	0.04	0.19**
Std. Error	(0.14)	(0.05)	(0.17)	(0.08)
Obs	754,843	633,237	696,228	584,955
R²	0.42	0.55	0.36	0.53
<i>R²_{Within}</i>	0.30	0.41	0.18	0.32
Firm FE	✓	✓	✓	✓
Model	Time FE	Time FE	Time FE	Time FE

Effect on the Aggregate Business Sector
(Weighted by Firm Size)

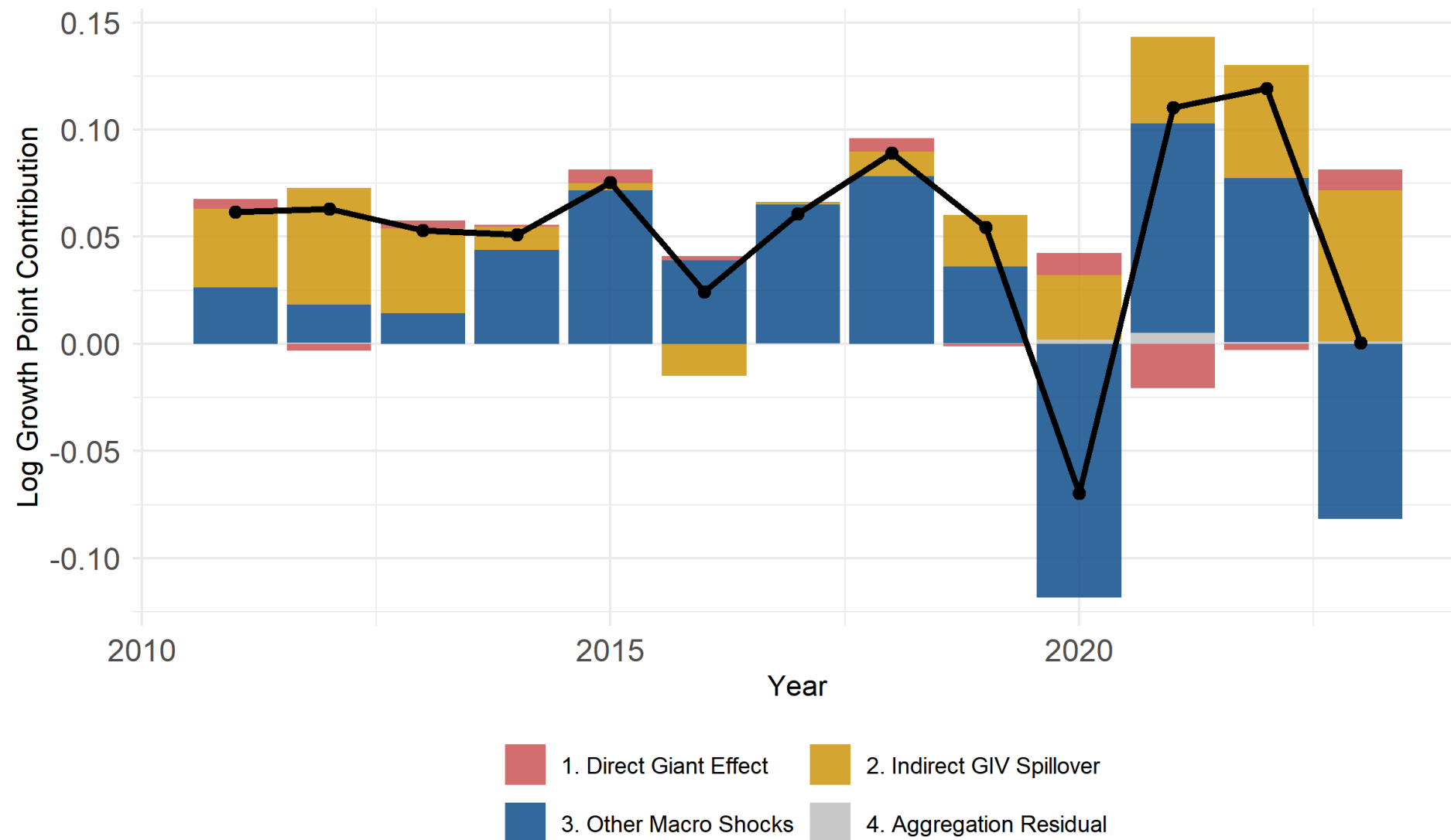
	Value Added		Wages	
	(h=0)	(h=1)	(h=0)	(h=1)
Estimate	0.30	0.40**	0.08	0.31***
Std. Error	(0.21)	(0.15)	(0.18)	(0.10)
Obs	733,650	616,547	696,228	584,955
R²	0.57	0.61	0.34	0.51
<i>R²_{Within}</i>	0.08	0.11	0.09	0.16
Firm FE	✓	✓	✓	✓
Model	Time FE	Time FE	Time FE	Time FE

Spillover to Value Added is Economically Meaningful and Exceeds Direct Effect



Wages Mediate the Pass-Through to Value Added, with a Lag

Historical Decomposition – Wages



Conclusions

- Israel's corporate tax base is exposed to a small set of dominant firms, even as product-market concentration has declined.
- Using the GIV framework, we show that idiosyncratic shocks to dominant firms propagate to non-dominant firms.
- Pass-through is strongest for value added and wage payments, and it appears with a one-year lag.
- Fiscal risk is therefore granular: dominant-firm shocks can amplify downturns, while positive shocks can also cushion recoveries.

Next Steps

- If dominant-firm shocks spill over positively to other firms, what is the transmission channel?
- Heterogeneity: which firms respond more strongly? Use the panel to estimate heterogeneous pass-through
- Robustness: additional effort to remove the common trend