BUSINESS GROUPS AND EMPLOYMENT

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BACKGROUND

Basic question: How does employment fluctuate with output? (Okun (1962) and many subsequent studies.)

Our study examines this question in the context of <u>business groups</u>:

"legally independent firms…which are bound together by persistent formal (e.g., equity) and informal (e.g., family) ties" (per Khanna and Yafeh (2007)).

RESEARCH QUESTION AND POSSIBLE EXPLANATIONS

Does the relation between employment and output vary across firms as a function of business group affiliation?

The channels:

- Internal capital markets.

- Differences in the sensitivity to macroeconomic shocks.

- Agency conflicts (majority vs. minority shareholders).

- Internal labor markets.

DATA AND VARIABLES

Data: Data on group affiliation are constructed using information from *Worldscope* and *Thomson Reuters Ownership* (focus on firms with >=500 employees).

Sample period: 1993-2011, annual data.

Key Variables:

- *Group Affiliated,* Employment and GDP Growth by country and year.

$$Employment\ Growth_{i,c,t} = \alpha + \beta \times GDP\ Growth_{c,t} + \gamma \times Group\ Affiliated_{i,c,t} +$$
$$+ \delta \times GDP\ Growth_{c,t} \times Group\ Affiliated_{i,c,t} +$$
$$+ \zeta \times Lag\ Controls_{i,c,t} + F_i + C_{c,t} + I_t + \varepsilon_{i,c,t}$$

- Controls: lagged change variable controls (Sales, ROA, Debt Ratio, Q, Return Volatility, CapEx), lagged employment growth.
- Country-year, Industry-year, Firm fixed effects, and interactions between each firm fixed effect and GDP growth (in some robustness tests).
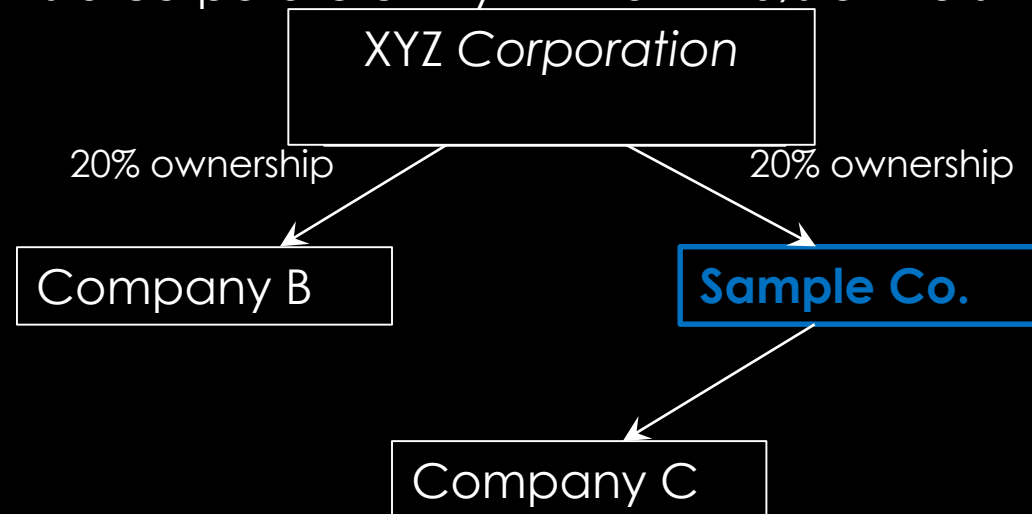
DEFINING "GROUP AFFILIATION"

Group Affiliated = 1 under "narrow" definition:
   i)   largest shareholder has a >=20% stake in more than one firm in our sample
   ii) the firm's largest shareholder is another firm in our sample, and this other firm has a 20% or greater ownership stake in the firm in question
   iii) firm is the largest shareholder of another sample firm with a >=20% ownership stake
   iv) the firm is identified as belonging to a large business group in Claessens, Djankov, and Lang (2000) and its largest shareholder has a 20% or greater ownership stake

Group Affiliated = 1 under "broad" definition:
   i)   Any of the above
   ii) largest shareholder is a corporate entity with a >=20% ownership stake

	Total Firm-Year Observations with Ownership Data	Percentage of Firm-Years that Are Group Affiliated, Narrow Definition	Percentage of Firm-Years that Are Group Affiliated, Broad Definition
Australia	1,506	2.4%	31.1%
…	…	…	…
Canada	2,285	3.3%	28.5%
Chile	377	14.0%	74.3%
China	10,314	7.6%	55.7%
France	4,810	8.1%	43.3%
Germany	5,014	13.4%	55.1%
Indonesia	1,718	20.5%	61.3%
Italy	1,852	9.9%	62.0%
United Kingdom	9,485	1.4%	13.5%
USA	26,748	0.8%	7.8%
Total	**124,377**	**8.2%**	**31.2%**

REGRESSIONS OF EMPLOYMENT GROWTH ON GDP GROWTH AND CONTROLS

Specification	(1)	(2)	(3)	(4)	
GDP Growth	0.646	0.712	---	---	
	[6.82]***	[4.22]***	---	---	
Group Affiliated	-0.015	0.006	0.005	0.004	
	[-2.52]**	[0.70]	[0.59]	[0.47]	
GDP Growth * Group Affiliated	**-0.312**	**-0.635**	**-0.489**	**-0.483**	
	[-2.57]*	**[-4.65]***	**[-3.28]***	**[-3.26]***	
Lag Employment Growth		-0.124	-0.127	-0.128	
		[-5.24]***	[-6.28]***	[-6.24]***	
				Uninteracted	Interacted w/ GDP Growth
Controls	No	Yes	Yes	Yes	Yes
Fixed Effects	No	Firm, Industry-Year	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year	
R-Squared	0.011	0.360	0.399	0.399	

ROBUSTNESS TESTS

- Positive vs. negative GDP shocks
- Interact each firm fixed effect with GDP growth
  - To account for possible differences in the sensitivity to shocks
- Controls in levels

- Falsification tests:
  - Placebo tests based on failed M&As
  - Placebo tests based on M&As that failed for plausibly exogenous reasons
    - government intervention
    - regulatory intervention
    - and/or changes in market conditions

PLACEBO TESTS BASED ON FAILED M&As

Sample	Observations with data for all control variables	Observations with data for all control variables	Observations with data for all control variables	Exogenous reasons for failed M&A only
GDP Growth	---	0.571	0.462	-0.701
	---	[0.40]	[1.39]	[-0.72]
Placebo Group	-0.195	-0.065	0.000	-0.076
	[-0.89]	[-0.71]	[0.02]	[-1.43]
GDP Growth * Placebo Group	**0.608**	**0.937**	**0.833**	**2.661**
	[0.12]	**[1.02]**	**[1.48]**	**[1.86]***
Controls	Yes	Yes	No	No
Fixed Effects	Firm, Country-Year, Industry-Year	Firm, Industry-Year	No	No
R-Squared	0.923	0.761	0.026	0.024

Sample	Excluding 1997, 2008, 2009	1997, 2008, 2009 only	Excluding financially constrained firms	Financially constrained firms only
Specification	(1)	(2)	(3)	(4)
GDP Growth	---	---	---	---
	---	---	---	---
Group Affiliated	0.013	-0.034	-0.002	-0.017
	[1.44]	[-0.78]	[-0.14]	[-0.68]
GDP Growth * Group Affiliated	**-0.583**	**-0.152**	**-0.463**	**-0.508**
	[-2.89]*	**[-0.39]**	**[-2.29]**	**[-2.24]**
Controls	Yes	Yes	Yes	Yes
Fixed Effects	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year
R-Squared	0.424	0.678	0.458	0.563

Proxy for Growth Shock	Firm-level sales growth	Industry-level sales growth
Specification	(1)	(2)
Growth Shock	0.413	0.146
	[17.16]***	[7.46]***
Group Affiliated	0.003	0.001
	[0.35]	[0.11]
Growth Shock * Group Affiliated	**-0.082**	**-0.076**
	[-2.07]**	**[-2.88]*****
Controls	Yes	Yes
Fixed Effects	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year
R-Squared	0.487	0.403

Sample	Above-Median ASDI	Below-Median ASDI	Full Sample	Full Sample
Dependent Variable	*Employment Growth*	*Employment Growth*	*Employment Growth*	*Employment Growth*
Specification	(2)	(3)	(4)	(5)
GDP Growth	---	---	---	---
	---	---	---	---
Group Affiliated	0.017	0.004	-0.005	0.006
	[0.60]	[0.38]	[-0.50]	[0.46]
*GDP Growth * Group Affiliated*	**-0.655**	**-0.425**	**-0.456**	**-0.481**
	[-1.70]*	**[-2.37]****	**[-2.98]*****	**[-3.25]*****
ROA			**0.363**	
			[11.23]***	
*Group Affiliated * ROA*			**-0.034**	
			[-0.43]	
Q				**0.026**
				[8.78]***
*Group Affiliated * Q*				**-0.004**
				[-0.43]
Controls	Yes	Yes	Yes	Yes
Fixed Effects	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year
R-Squared	0.388	0.442	0.403	0.401

	Same-country vs. Cross-country groups	*Diversified* = 1 if firm has more than one sales segment
Specification	(1)	(2)
GDP Growth	---	---
	---	---
Group Affiliated	0.004	0.005
	[0.47]	[0.58]
GDP Growth * Same-Country Group	**-0.557**	
	[-3.11]*	
GDP Growth * Cross-Country Group	**-0.267**	
	[-1.43]	
GDP Growth * Group Affiliated		**-0.484**
		[-3.28]*
Diversified		0.006
		[1.02]
GDP Growth * Diversified		**-0.182**
		[-1.77]*
Controls	Yes	Yes
Fixed Effects	Firm, Country-Year, Industry-Year	Firm, Country-Year, Industry-Year
R-Squared	0.399	0.399

CONCLUSIONS

- We document that business group affiliation enables firms to reduce fluctuations in employment following changes in the business cycle.
  - The results, based on a new database of group affiliation, are robust to a variety of tests designed to mitigate endogeneity concerns.

- We provide some evidence consistent with the presence of internal labor markets.
  - The previous evidence on ILMs (1) appears to generalize across a multitude of countries and (2) it extends to a series of systematic shocks.

- By documenting higher job security for employees of group affiliated firms, we point to a non-trivial set of stakeholders who appear to enjoy a bright side of group affiliation.