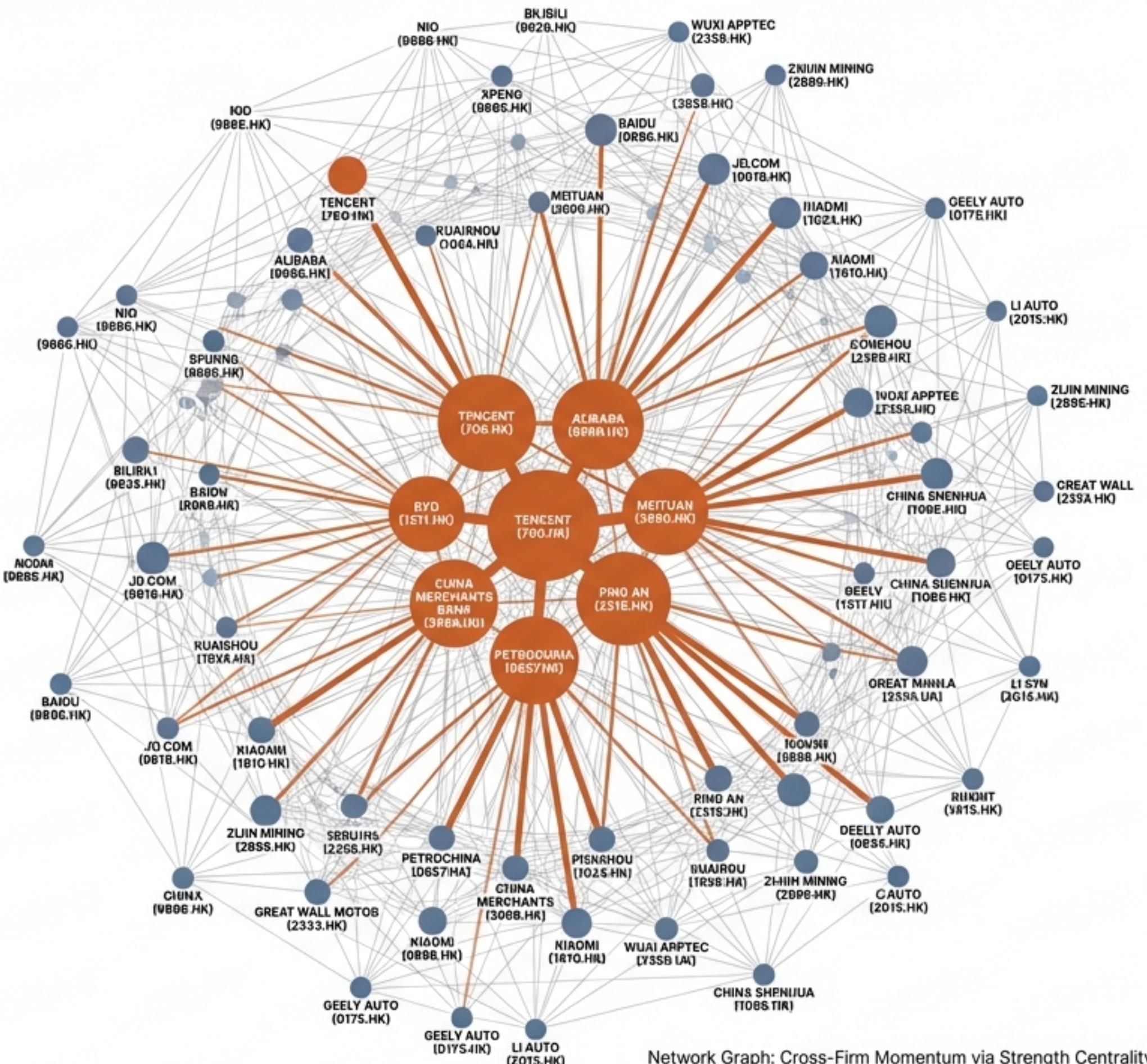


Detecting Alpha in the Noise: The Role of Leader Firms

Unlocking Cross-Firm Momentum via Strength Centrality in Emerging Markets



Based on: Mao, Shi, Chen, & Wan. *Journal of International Financial Markets, Institutions & Money* (2025).

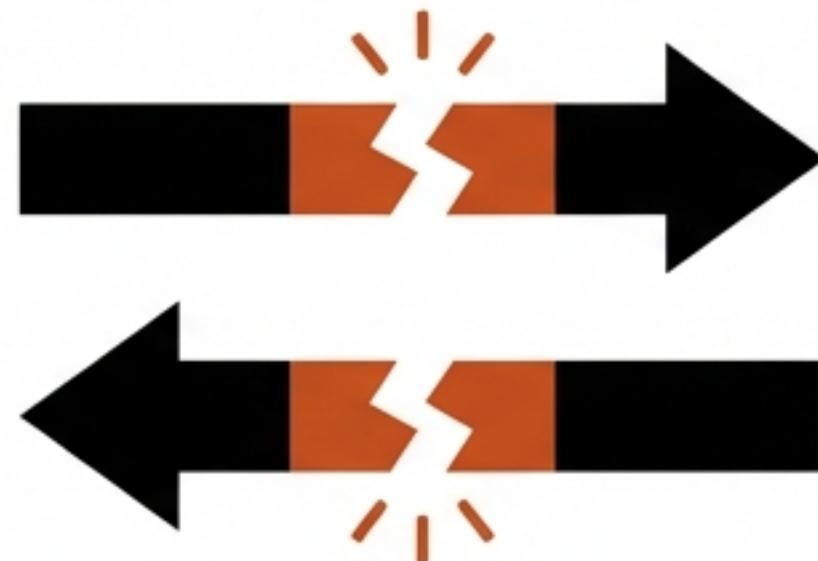
Key Concept: The Asymmetry of Information Diffusion.

Network Graph: Cross-Firm Momentum via Strength Centrality

Executive Summary: Network Centrality as a Predictor of Returns

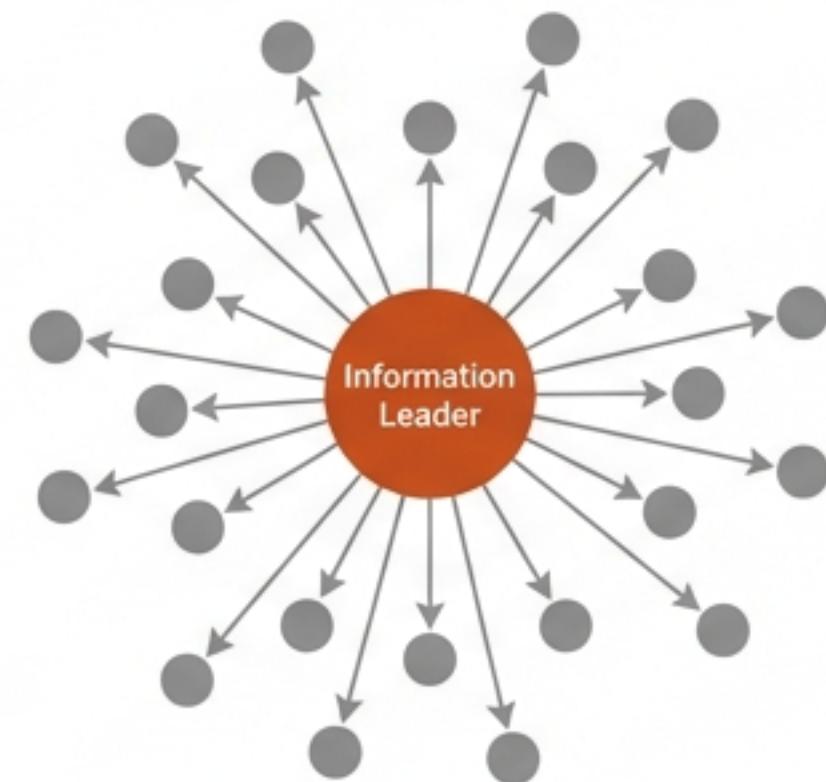
The Challenge

Traditional momentum strategies assume information flows symmetrically between firms. This breaks down in China due to sparse analyst coverage, retail dominance, and ownership frictions.



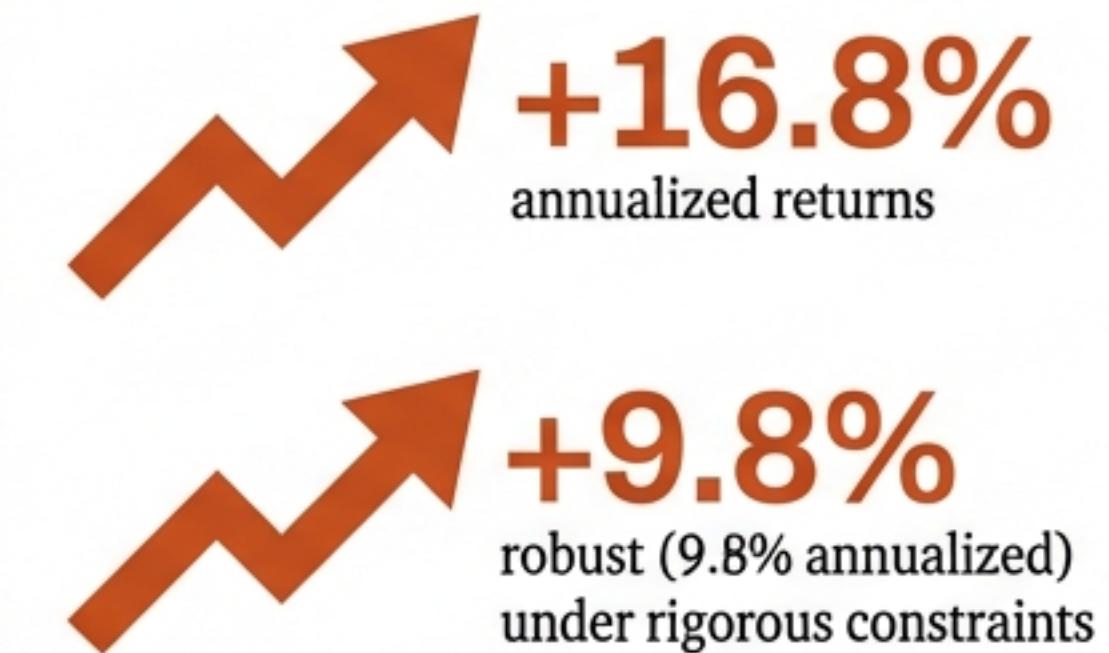
The Solution

A novel weighting scheme based on Strength Centrality (SC). By summing the weights of a firm's connections, we isolate "Information Leaders" who absorb news fast and transmit it to the periphery.



The Result

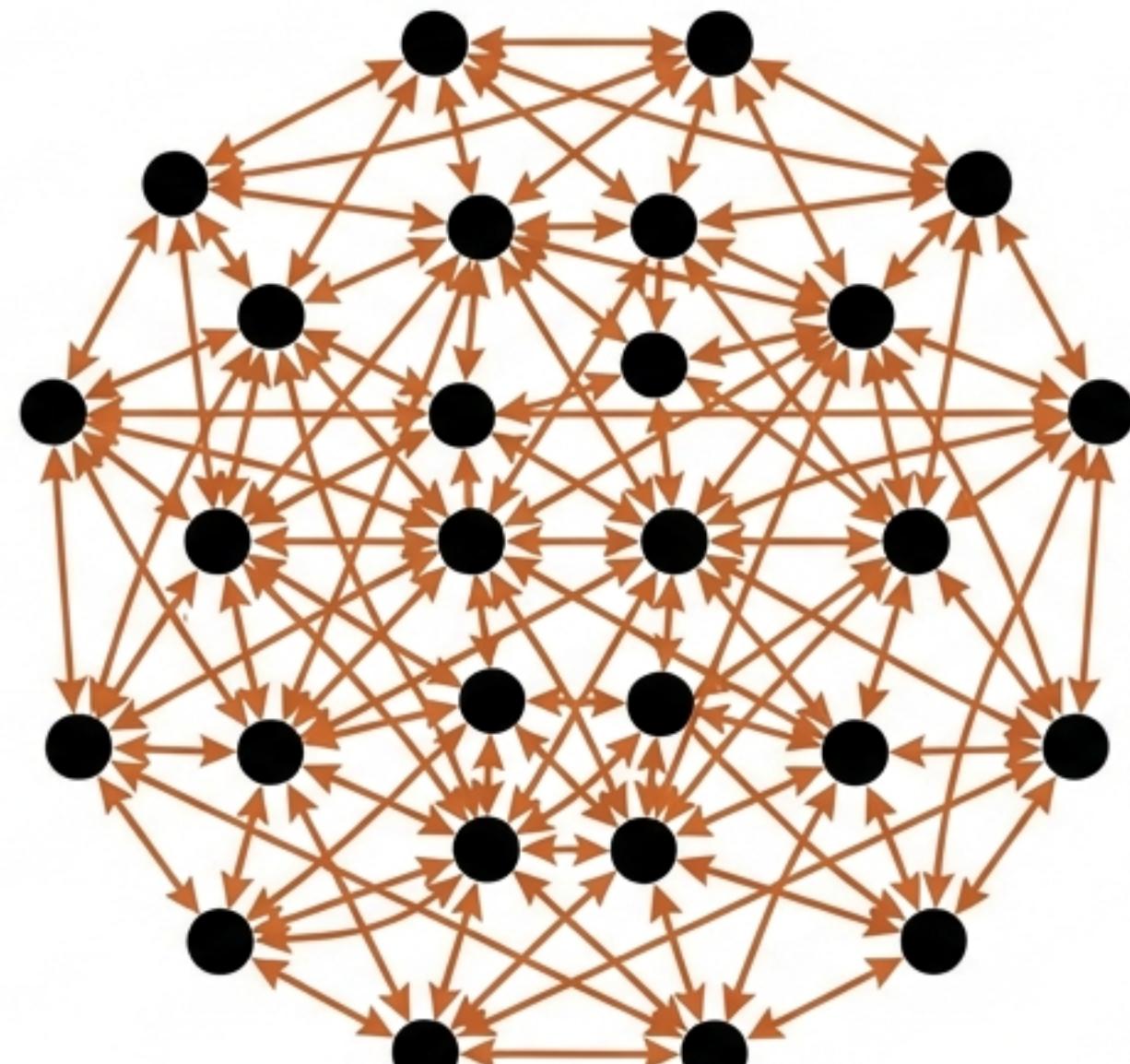
A long-short strategy based on SC yields ~16.8% annualized returns (Lax filter) and remains robust (9.8% annualized) under rigorous constraints where traditional metrics fail.



Bottom Line: Information flows directionally from **Leaders (FIEs)** to **Laggards (DPEs)**. Capturing this spillover generates significant **Alpha**.

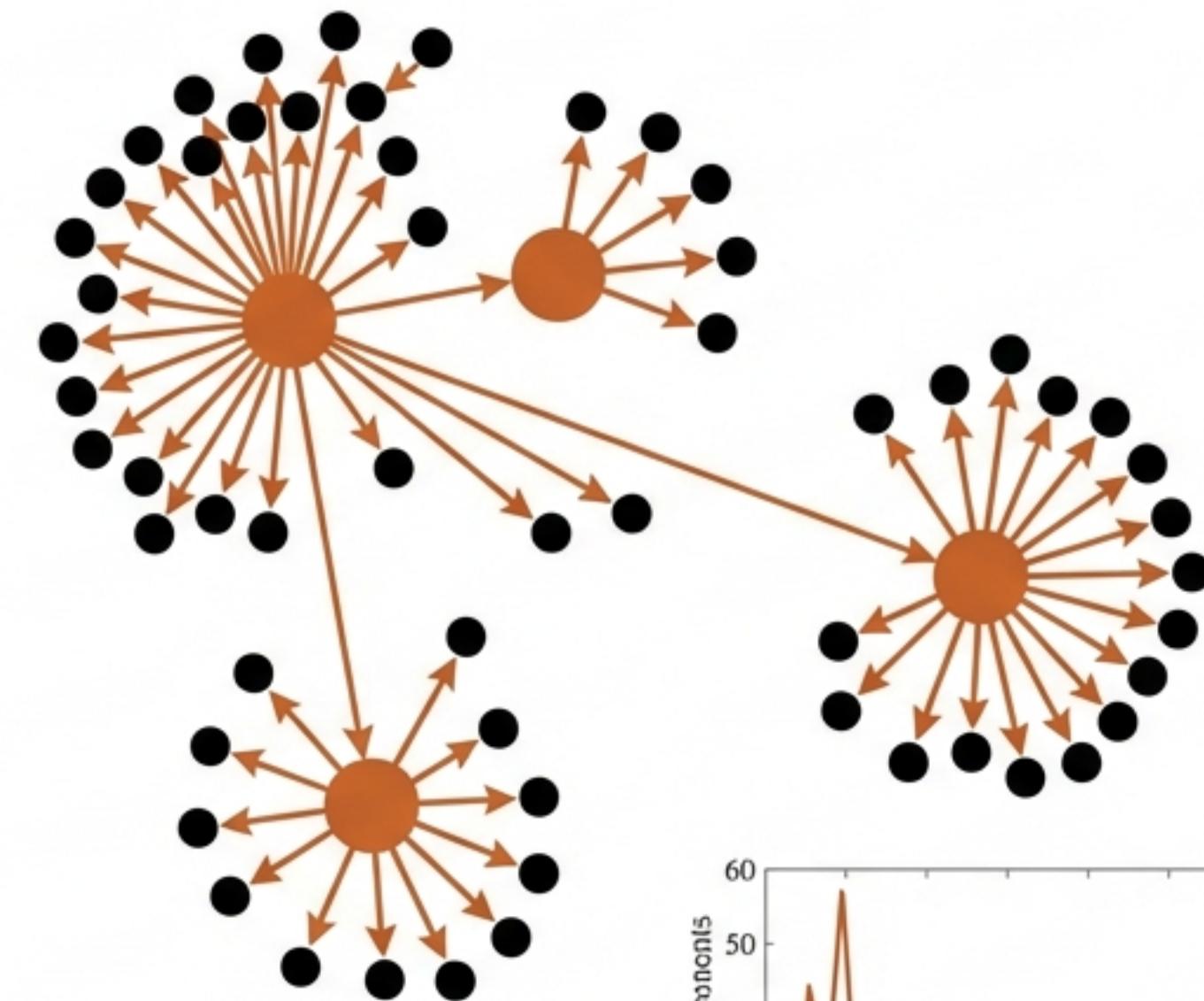
The Friction Gap: Why Developed Market Models Fail in China

Developed Markets (USA)

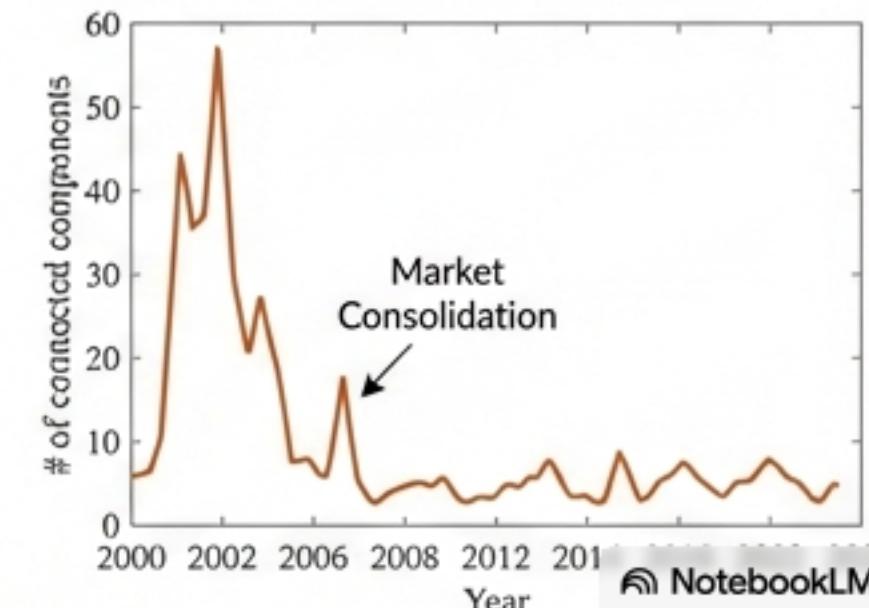


Dense Coverage
Symmetric Flow
Professional Dominance

Emerging Markets (China)

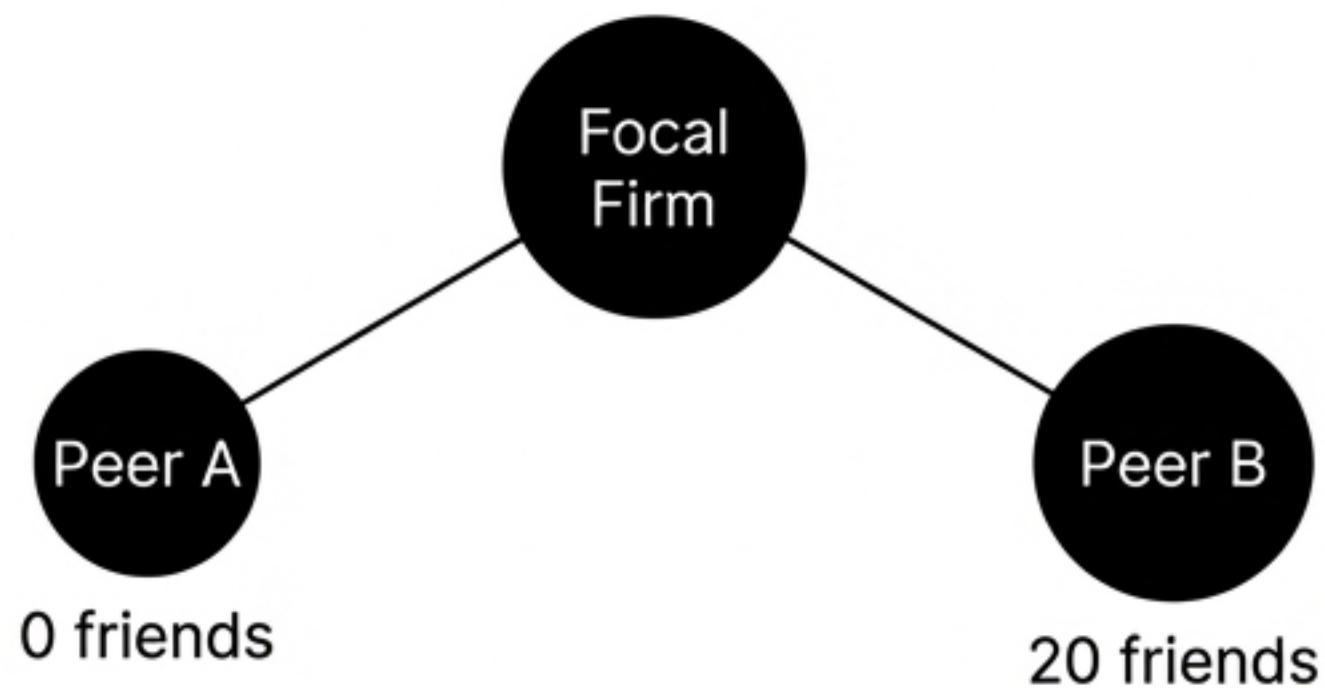


Sparse Coverage
Asymmetric Flow
Retail Speculation



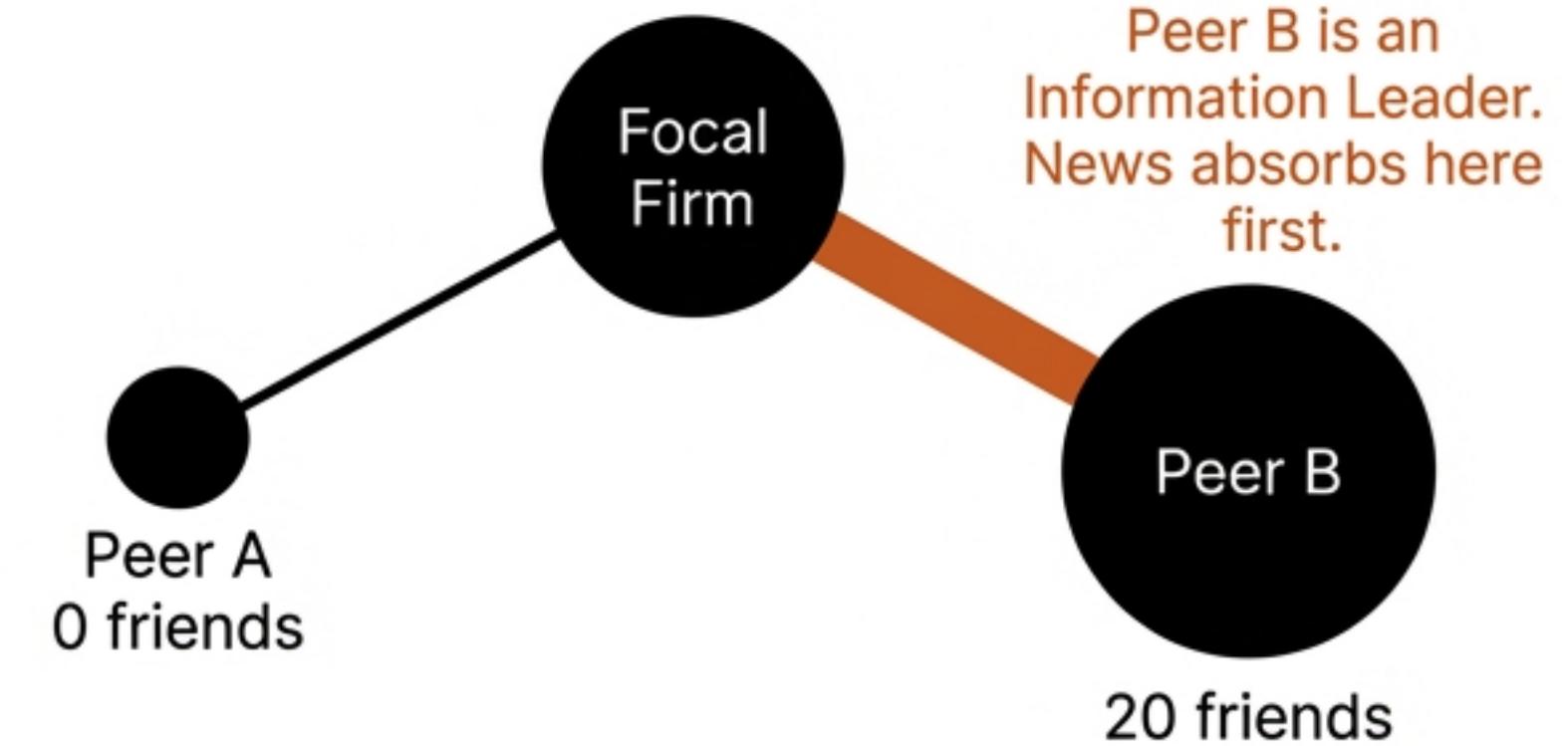
Beyond the Headcount: Defining Strength Centrality (SC\$)

The Count Method
(Traditional)



Weights Peer A and Peer B
equally ($N=1$).

The Strength Centrality Method
(Innovation)

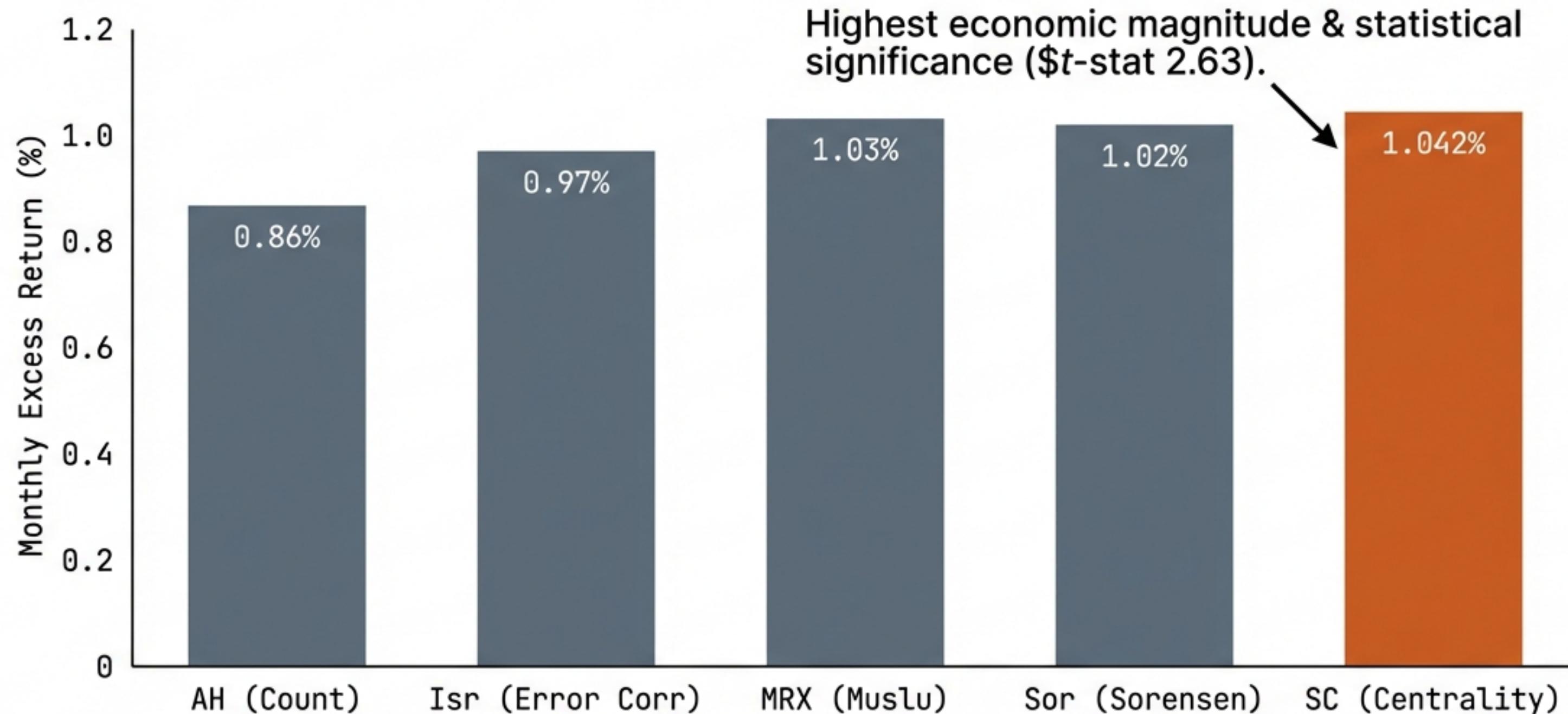


Weights Peer B significantly higher
($SC_j = \sum n_{j,m}$).

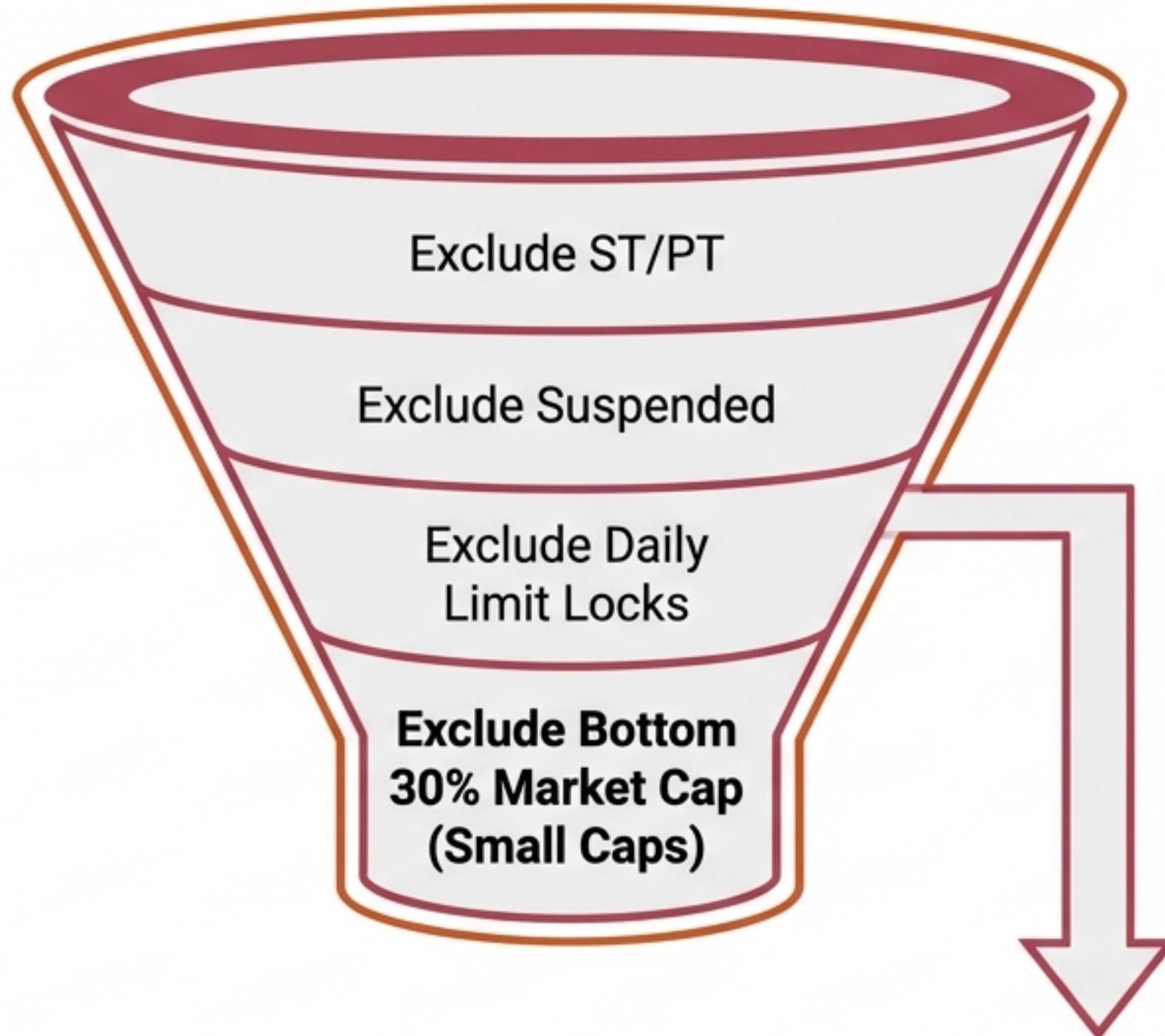
The Logic: We bet that news from High-SC peers predicts the returns of Low-SC focal firms.

Performance Superiority: \$C\$ Outperforms Traditional Weighting

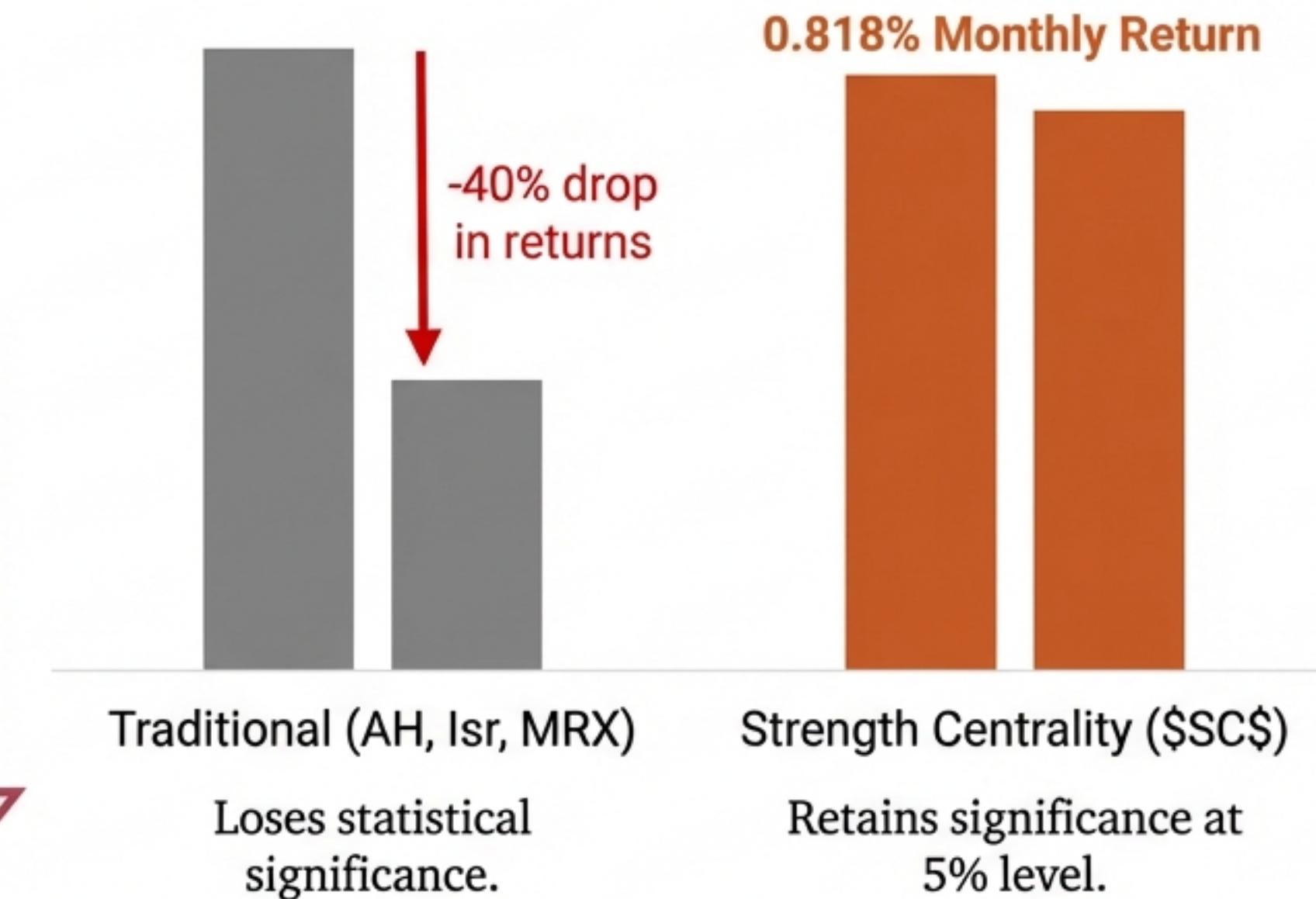
Long-Short Portfolio Returns (Lax Filter).



Surviving the Stress Test: Performance Under Rigorous Filtering



Performance Comparison After Filtering



Only \$SC\$ maintains robust Alpha after removing illiquid and small-cap stocks.

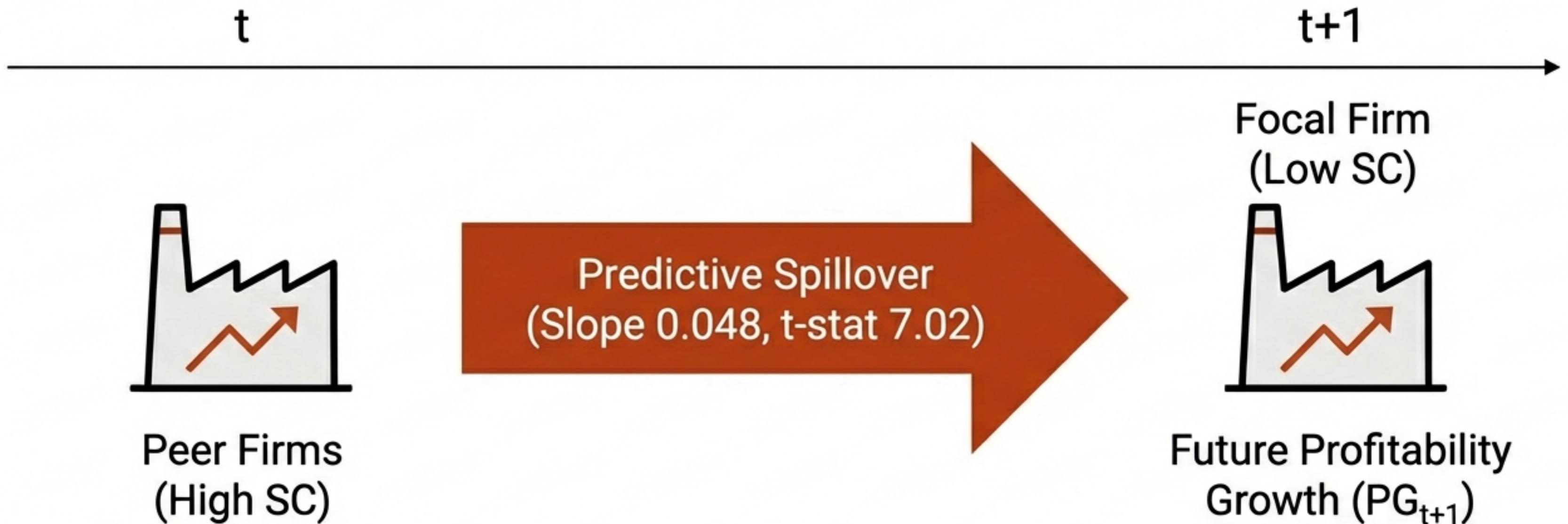
The Alpha Hierarchy: Spanning Tests

Does \$\$\$ add new info, or is it just a proxy?

Controlling For...	Resulting Alpha of...	
	\$SC Strategy	Other Strategies
	Alpha > 0.3% (\$t-stat > 3.0)	Alpha ~ 0 or Negative
	Alpha > 0.3% (\$t-stat > 3.0)	Alpha ~ 0 or Negative
	Alpha > 0.3% (\$t-stat > 3.0)	Alpha ~ 0 or Negative

Dominance: \$C\$ explains the returns of other strategies,
but other strategies **cannot** explain \$C\$.

The Fundamental Link: Predicting Profit Growth



SC excels at identifying Cross-Period linkages.
Traditional Count methods identify contemporaneous links (useless for prediction)
but fail to predict future growth.

Anatomy of a Leader: Who Drives the Signal?

Persona Card



Analyst Coverage: ~41 Analysts (vs. 2 for laggards)

Market Cap: LnSize ~17.1 (Large Cap)

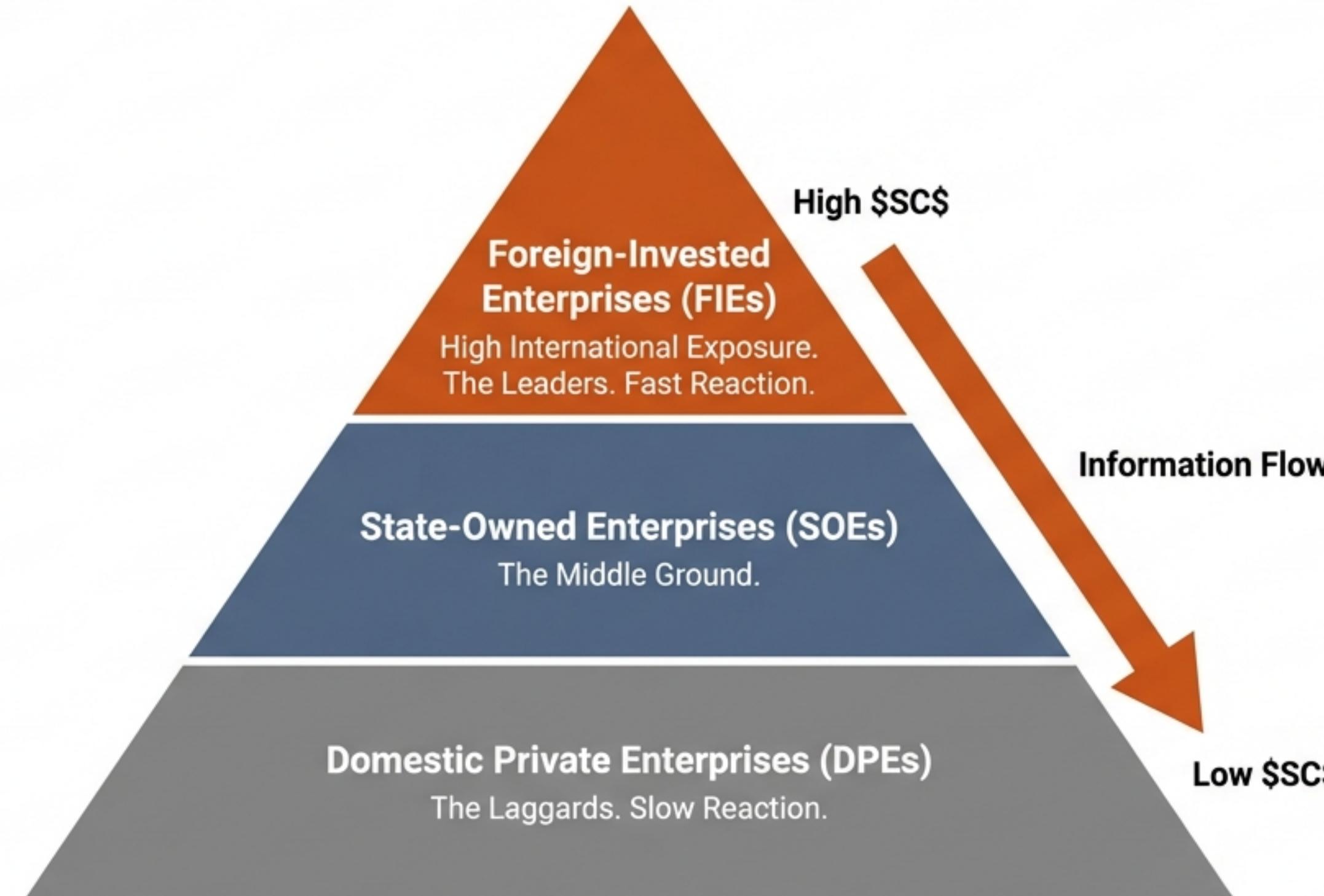
Institutional Ownership: ~49% (High Smart Money)

Arbitrage Costs: Low (Easy to trade)

Search Volume: High (High Attention)

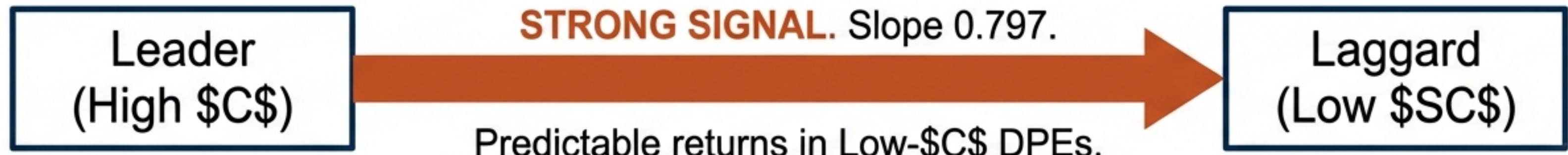
The Efficient Processor. These firms absorb news instantly.
The Alpha opportunity comes from the delay in this news reaching their connected peers.

The Institutional Hierarchy: Ownership Structure



The Waterfall Effect: Directional Spillovers

Scenario A: Leader (High \$C\$) → Laggard (Low \$C\$)



Scenario B: Laggard (Low \$SC\$) → Leader (High \$SC\$)



Takeaway: Information flows downhill. There is no reverse spillover.

Ruling Out Alternatives

Dismantling the “Straw Men” Arguments



Is it Industry Momentum?

No. \$SC remains significant even when excluding same-industry peers.



Is it Frog-in-the-Pan (Information Discreteness)?

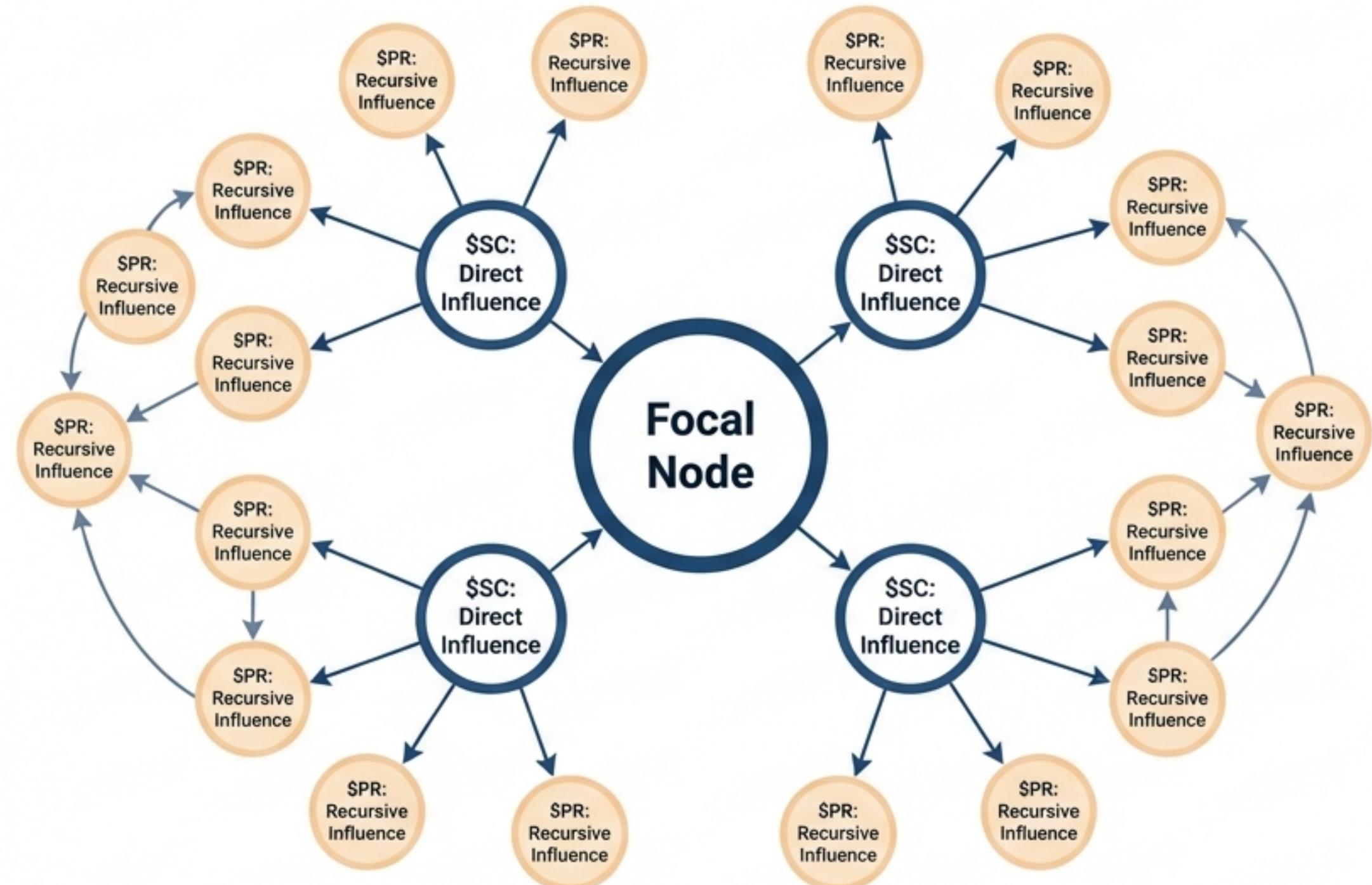
No. Including \$SC kills the predictive power of Discreteness factors.



Is it just Size or Analyst Count?

No. \$SC subsumes these effects in bivariate regressions.

The Next Evolution: PageRank Centrality (\$PR\$)

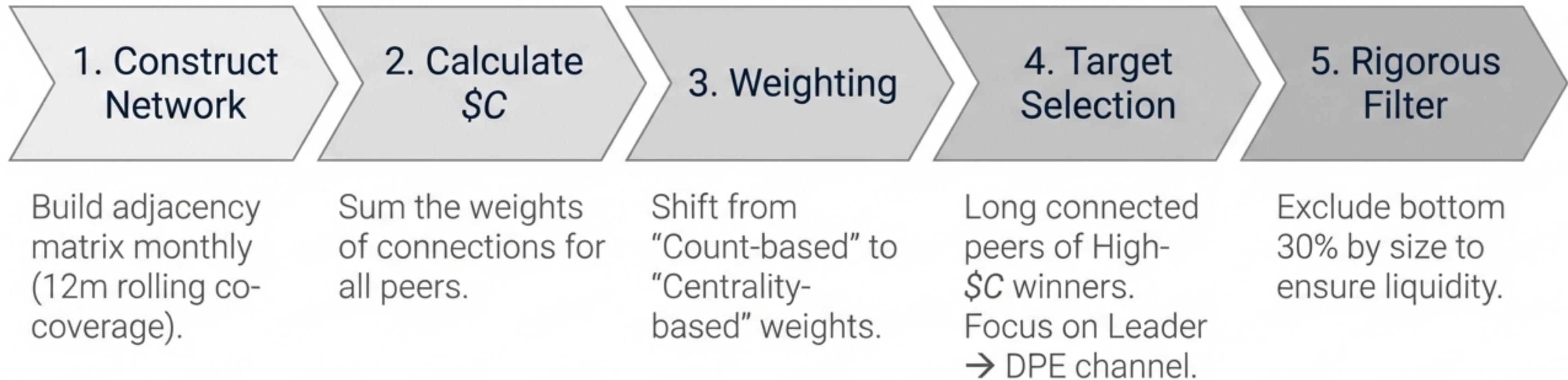


If direct connections matter, 'connections of connections' matter more.

PageRank (\$PR\$) captures global influence.

Result: Even higher returns (1.35% monthly) that cannot be explained by \$SC\$.

Implementation Guide for Global Investors



Capturing the Signal in Asymmetric Markets



Structure

Centrality > Counts



Hierarchy

FIEs Lead, DPEs Lag



Alpha

16.8% Ann. Return

“Cross-firm momentum is not absent in Emerging Markets;
it is merely hidden by methodological limitations.”