CONTROLLING EXTERNALITIES: OWNERSHIP STRUCTURE AND CROSS-FIRM EXTERNALITIES

Discussant

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How to incentivize the controlling shareholder to do “good”?

Firms with controlling shareholders are prevalent in the US and around the world.

**

❖ They are large firms.

❖ FANG firms represent around 13% of S&P 500 market cap (2021).

Too much concentration of one's wealth in one firm.

Mark invested around 94% of his wealth in Facebook. (Table 3).

Having such a high financial investment in one firm, Facebook is important to him.

He is unlikely to avoid negative effects from activities that Facebook might generate on other firms.

Mark Zuckerberg

↓

facebook

Cash flow right: 29.3%

Voting rights: 58%

Index funds

- Do Index funds have the incentives and capability to influence *controlling shareholders* regarding externalities?

STATE STREET.

Can Index Funds influence controlling shareholders?

Shareholders	Share on Alphabet's Equity	Share on All Votes
Vanguard	6.4%	2.9%
Larry Page	5.7%	26.1%
Sergey Brin	5.5%	25.1%
BlackRock	5.5%	2.5%
Fidelity	3.7%	2.1%
Eric Schmidt	1.2%	5.4%

As of 2018

Voting rights of Larry Page + Sergey Bin + Eric Schmidt = 56.6%.

Dispersed ownership dummy = 1
for countries with with dispersed ownership in 2004 – 2012
(constructed by Aminadav and Papaioannou (2020)).

	(1)	(2)	(3)	(4)
	Linear Model		Poisson Model	
	Dependent Variable: Log of (1 + Number of Engagements)		Dependent Variable: Number of Engagements	
Indicator = 1 for Dispersed	**1.81138*** **	**2.09410*** **	**2.01003*** **	
Ownership Structure	**(0.479)**	**(0.420)**	**(0.516)**	
Free Float (%)				**0.09989*** **
				(0.020)
(Log of) Stock Market Cap	0.45892***	0.15709	0.00006**	0.00007***
	(0.060)	(0.122)	(0.00002)	(0.00002)
(Log of) Number of Listed		0.30338**	0.00117***	0.00051***
Firms		(0.124)	(0.0002)	(0.0002)
(Log of) GDP per capita		0.60876**	0.00003***	-0.00001
		(0.293)	(0.000009)	(0.00002)
(Log of) Population		0.11356	-0.00226***	-0.00068
		(0.214)	(0.001)	(0.001)
(Log of) CO_2 Emissions		0.12472	0.00019*	0.00016
		(0.132)	(0.0001)	(0.0001)
(Log of) Genetic Distance		0.07765	0.00085**	0.00011
from the US		(0.060)	(0.0004)	(0.001)
Continent Fixed Effects?	N	Y	Y	Y
Constant	-1.15367***	-7.73421***	-1.35517*	-5.16941***
	(0.246)	(2.825)	(0.773)	(1.342)
Observations	78	76	76	53
R^2 or Pseudo-R^2	0.697	0.794	0.915	0.935

Engagement by Big 3 (data are from 2018-2019 from Azar et al., 2020))

Regressions:

using the mean country level data from 78 countries.

Big 3 seems to engage more in the countries with relatively dispersed ownership structures, namely Australia, Canada, Ireland, New Zealand, Taiwan, UK, and US.

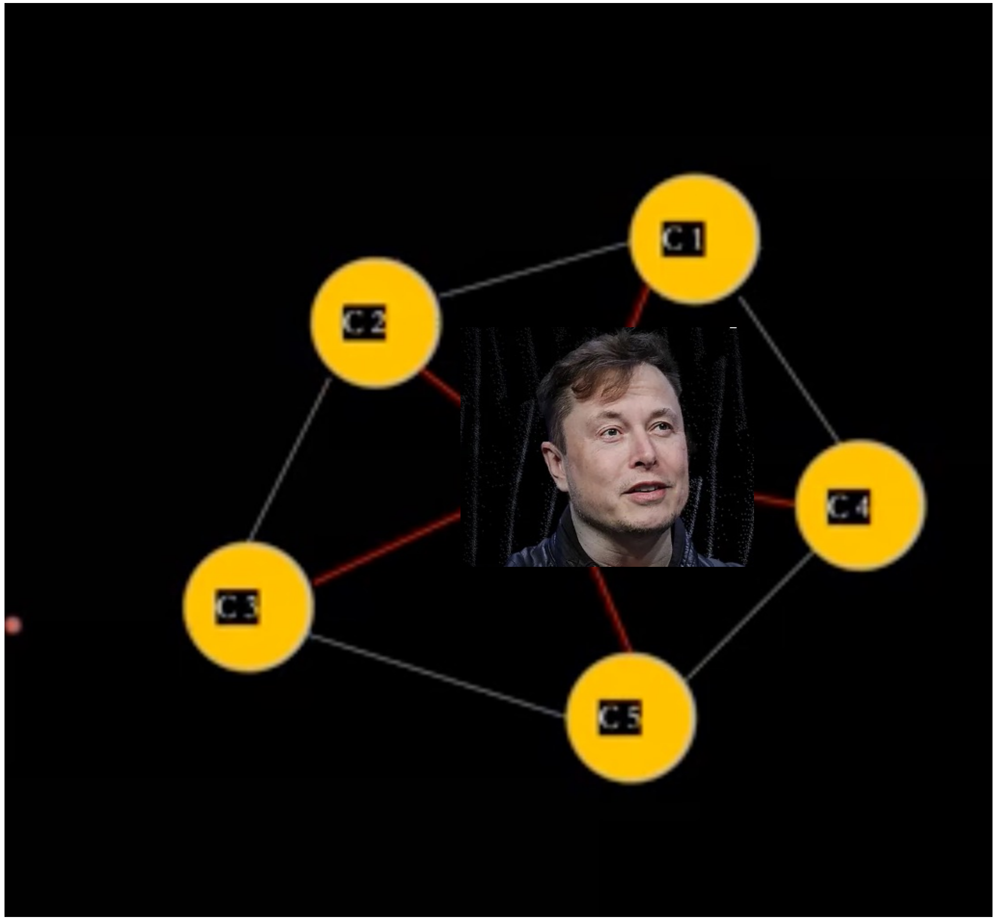
What about having the controlling shareholder behave like large and diversified Index funds?

How to make controlling shareholders be pro-social?

Common owners

- Instead of holding just one firm,
- A controlling shareholder should diversify by investing in several firms.
- As he controls many firms, the controlling shareholder would act as a common owner.
- He is more likely to internalize externalities generated by their group firms.

(RE: the literature on common ownership)



Controlling shareholders vs. Fund managers

- Controlling shareholders might be better positioned to influence corporate decisions of group firms as well as co-ordinate their corporate activities.
- Less agency problem, unlike fund managers as argued in e.g., Bebchuk et al. (2017), Christies (2021)).

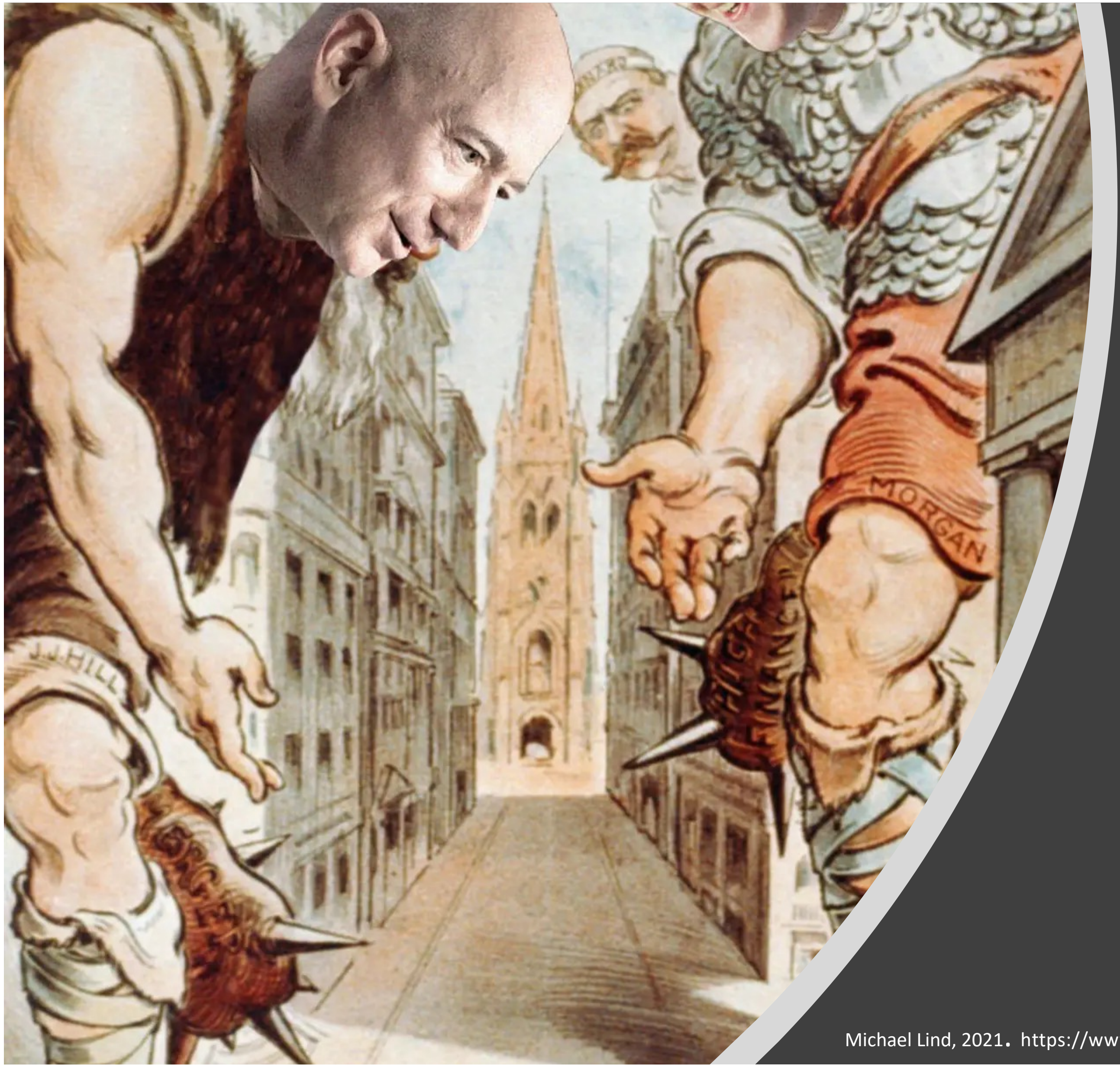
How to achieve diversified portfolio with limited wealth?

The idea of having diversified controlling shareholders sounds good. Why are they so rare in the US?

- **Cognitive bias**: Founders are over-optimistic about the firms that founded.
- **Pay package**: Management stock-based compensation increases their shareholdings
- **Rent seeking**: The divergence of cash flow and control rights is problematic as controlling shareholders might extract private benefits of control.
- **Tax**: Founders are likely to defer capital gains taxes.

Interesting implications

- Innovative idea
- Dual class shares can incentivize firms to be pro social.
  - Dual class shares allow controlling shareholders to diversify their wealth.
  - Via diversification, controlling shareholders would behave like common owners.
  - Controlling shareholders do not only internalize externalities across the firms, but also can efficiently coordinate activities to minimize externalities.



Robber Barons in the New Gilded Age

Michael Lind, 2021. https://www.tabletmag.com/sections/news/articles/robber-barons-michael-lind

How does the model work?

- ❖What is the extent of externalities the model aims to solve?
  - Environment (CO_2, toxic emission, water pollution, etc)
  - US, regional, global
  - This determines the amount of fund that one needs to solve externalities.
- ❖Why would controlling shareholders be incentivized via common ownership to act as pro-social owners?
  - The paper applies the concept outlined in the common ownership literature to explain the mechanism.
  - This literature is developed based on institutional investors' view.
  - But controlling shareholders play a different role in the firm.

Controlling shareholder is the Super Commander (The CEO/Chairman)

❖ We need a model to guide why a diversified controlling shareholder would internalize externalities. And how?

- The controlling shareholder maximizes the whole group firm value, and not a particular company per se. (See the biz group literature)

Max {the value of all group firms}

- Externalities: Actions taken by each firm can affect value of other firms.
- The controlling shareholder would take into account impacts of activities of group firms because by doing so would serve his ultimate goal of group value maximization.
  - He would coordinate his group firms when choosing corporate policy and would avoid activities that reduce overall group value.

What is the controlling shareholder’s objective?

- Max {Group Value} by doing “good”
- Max {“Social impact” AND Group Value}
- Max {??}

Diversification helps to be pro-social, but How?

- According to the model, the more firms one controls, the bigger social impact one could generate.

❖ **Financial constraint:** A controlling shareholder has limited wealth.
  - His wealth is not comparable to index funds.

❖ With limited wealth, there should be some guidelines on investment strategy so that he would achieve "social impact" and group value maximization.
  - What sorts of externalities one should focus?
  - Which firms should he own? And in which industries?

How does the incentive mechanism work in practice?

- Provide some examples to elaborate how the model would work:
- how the controlling shareholder internalizes externalities across his firms.

Elon Musk’s Net worth: $218.1 billion (2022)

Space launches
Telecoms
Satellite internet

Tesla: 68% of his wealth

Infrastructure
Real estate
Shipping

Medicine
Robotics
Military
Prosthetics

Competitive gaming
AI/Machine learning

https://www.cbinsights.com/research/report/elon-musk-companies-disruption/

Is his portfolio choice “right” to reduce CO2 emission?

How does the incentive mechanism work within this group firms?

- Some examples
- What does it mean by internalizing externalities across these firms?
- What are externalities that the firms are encountering?
- What sorts of actions that he could coordinate among these firms to minimize externalities and max his group value?

A smaller mission: Reduce CO2 emission

Should Mr. Musk focus on the auto industry?

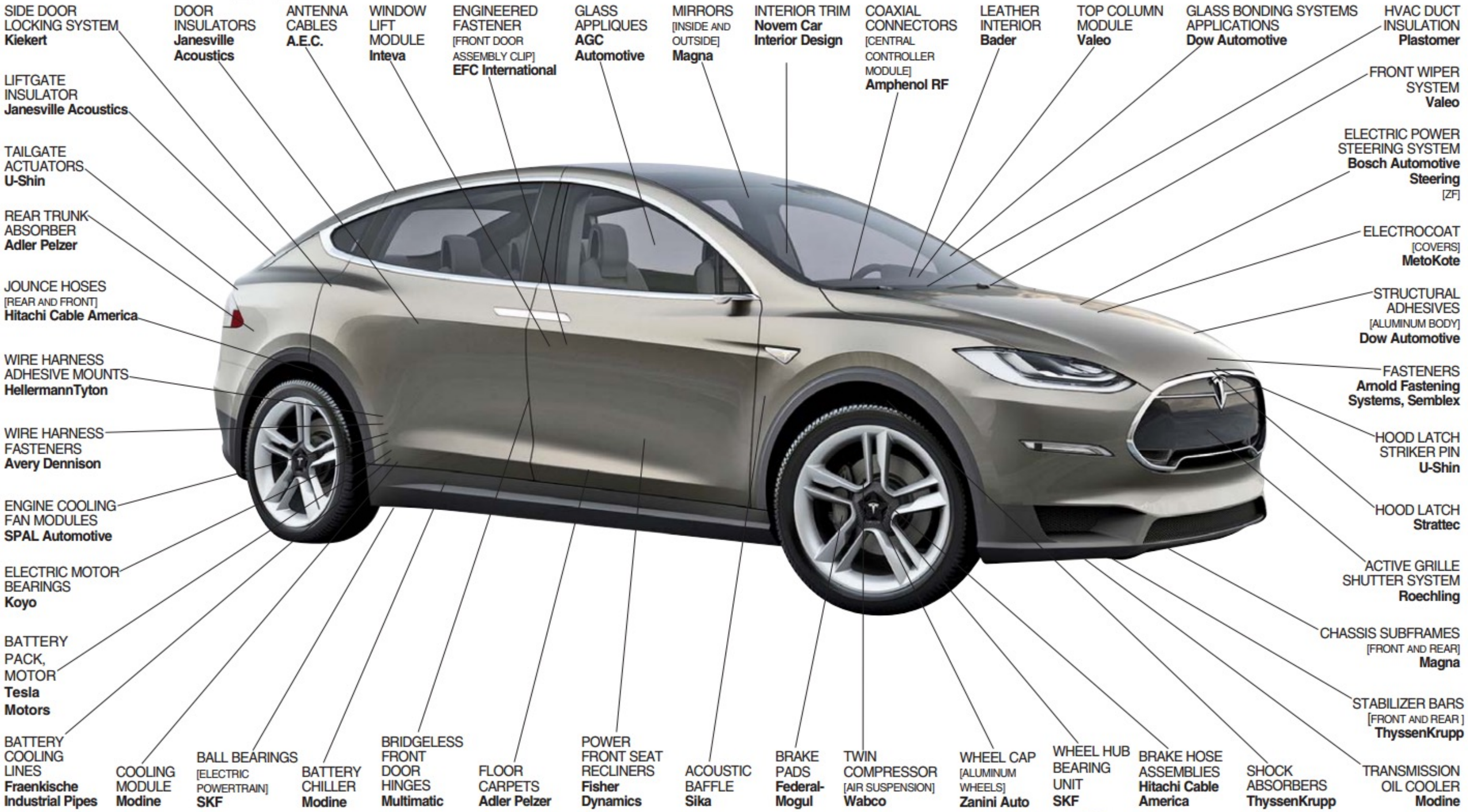
- Should he own all US auto firms?
  - Ford, GM, Daimler
- Should he own all global major 14 car firms?

The market share:
How many percent of the auto industry should he control so that their corporate policy would have sufficient impacts on CO2 emission?

10%? 30%? 50%? 80%?

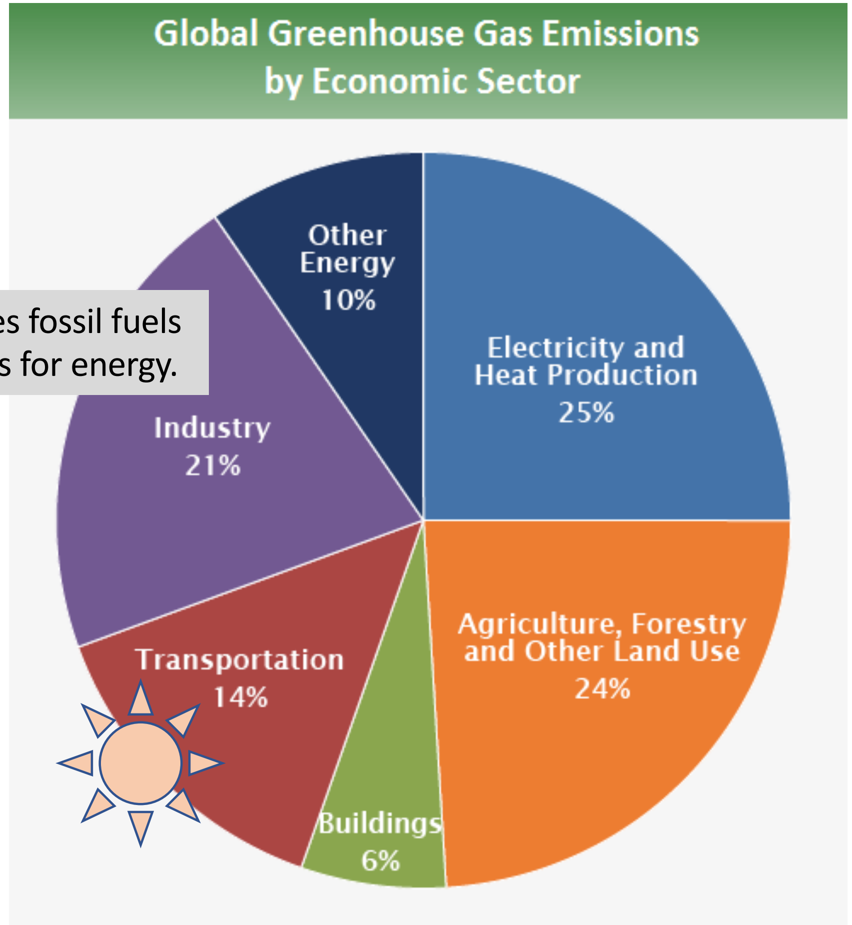
Source: https://mlgaplc.com/1-million-question/

Suppliers to the 2016 Tesla Model X



Should Mr. Musk also own major suppliers?

Industry primarily involves fossil fuels burned on site at facilities for energy.



https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data

Auto-makers are only a small part of CO2 producers.

Should Mr. Musk also own firms in other industries to internalize externalities?

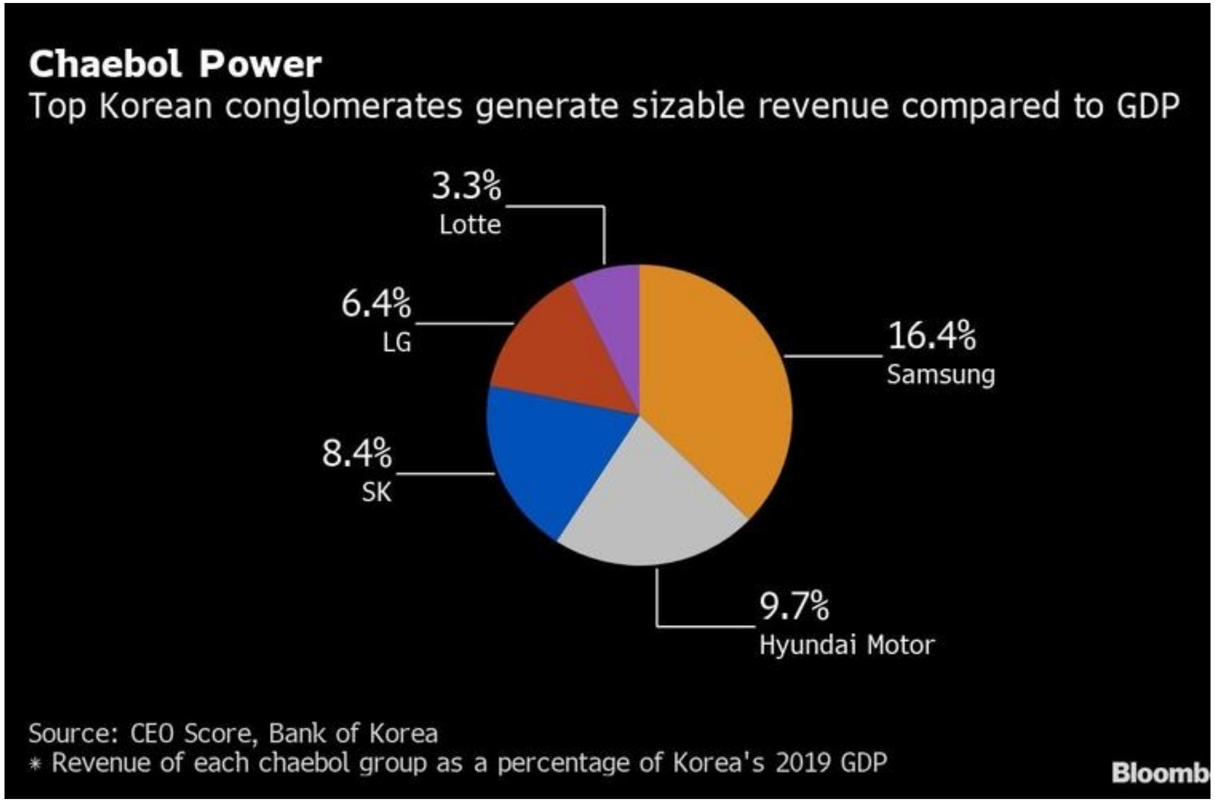
By encouraging controlling shareholders to be more diversified via dual class shares, they will control a bigger business empire, that is worth much more than their wealth, and therefore increases their economic power.


Aristocratic oligarchy

Might this proposal work?

- **Business groups** in Asia and Latin America appear like what the paper proposes.
  - A handful of controlling shareholders own diversified portfolio.
  - They control an extensive number of firms, often in various industries.
  - Control mechanism: Pyramids & cross-shareholdings enable families to control with little cash flow rights, which similar to dual class shares.
  - Some groups are big, dominating a large proportion of a country's GDP.

Top 5 chaebols' revenue is 44.2% of GDP (2019)



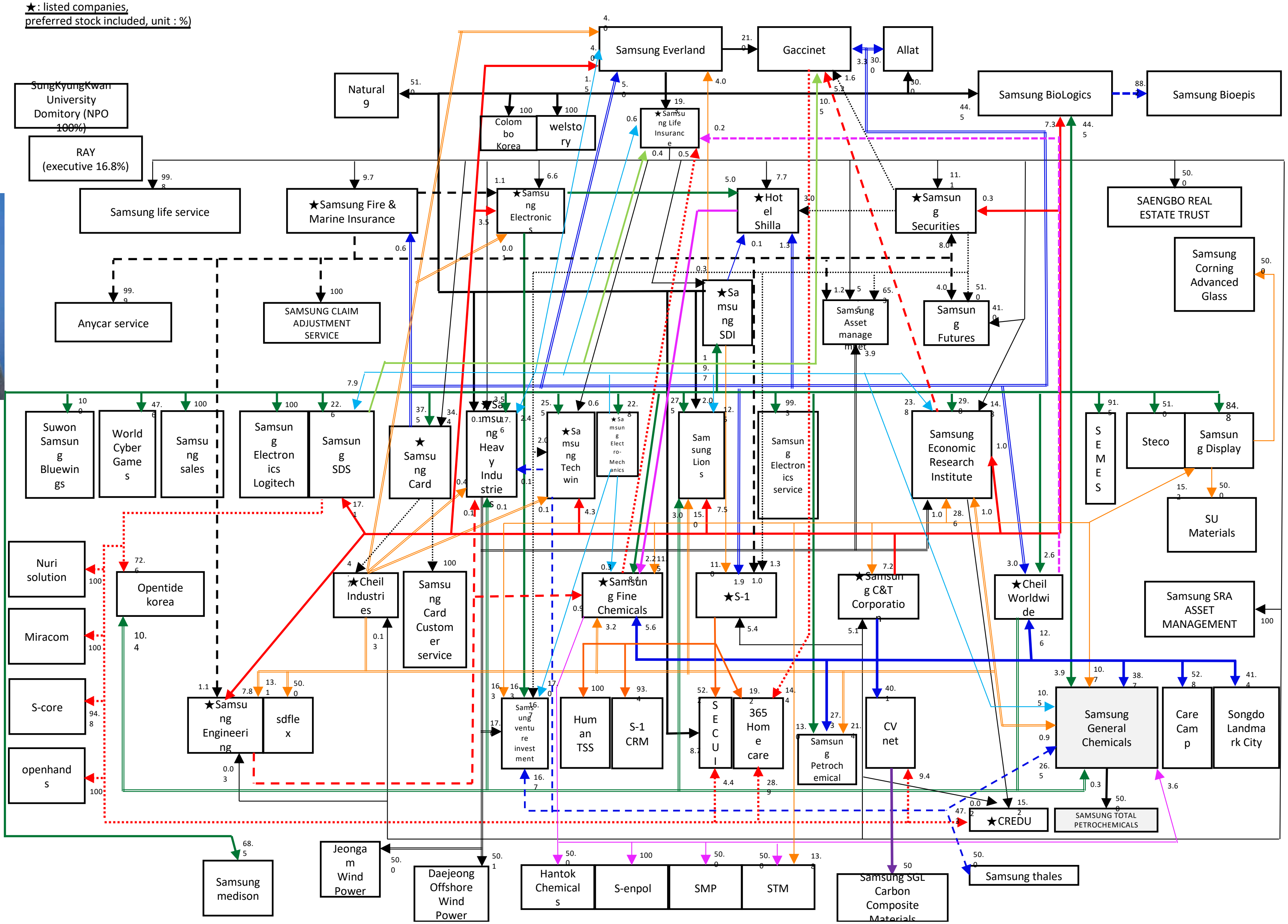
SAMSUNG

HYUNDAI

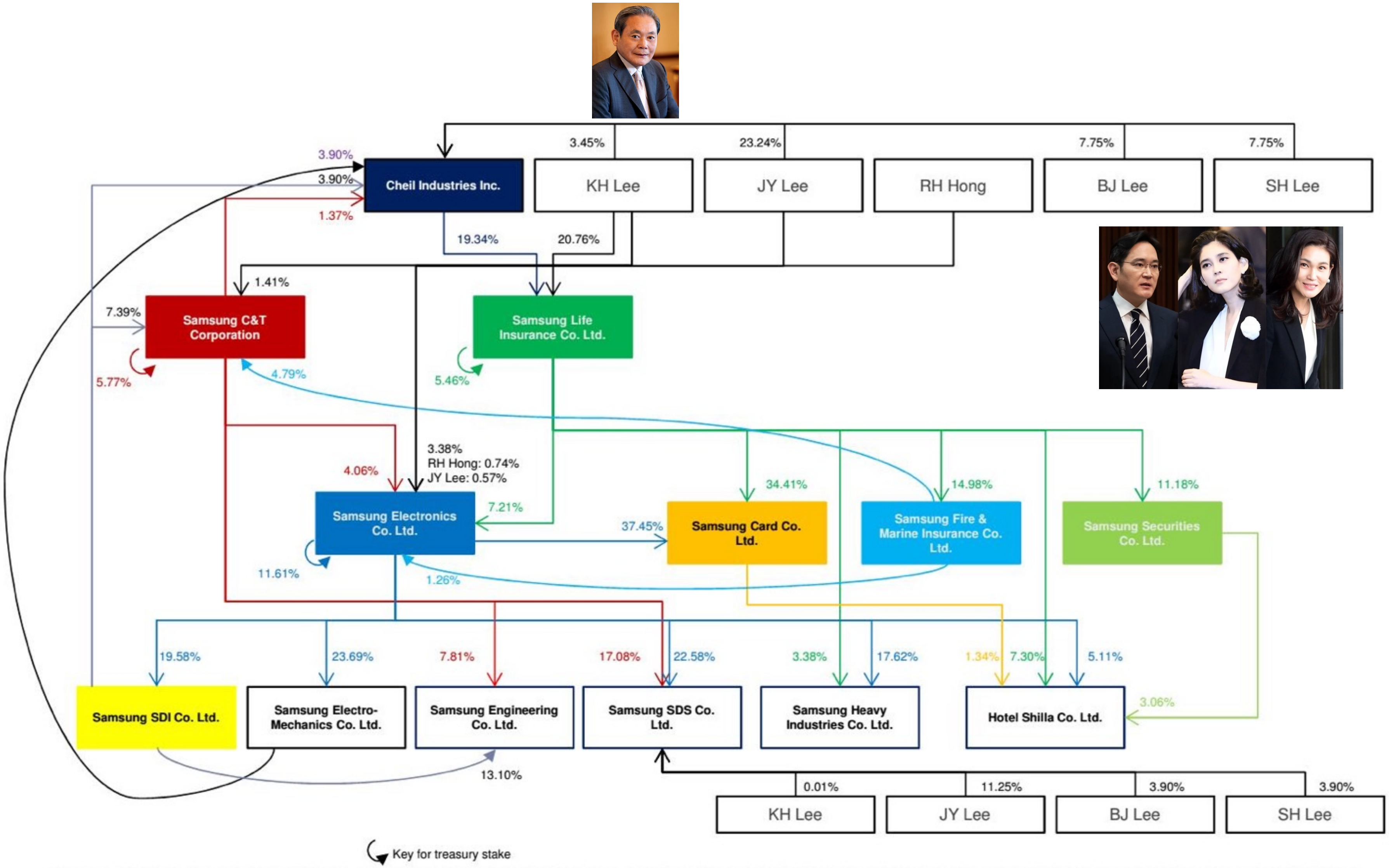
LG
Life's Good

LOTTE

SK 증권



Samsung Group in 2010

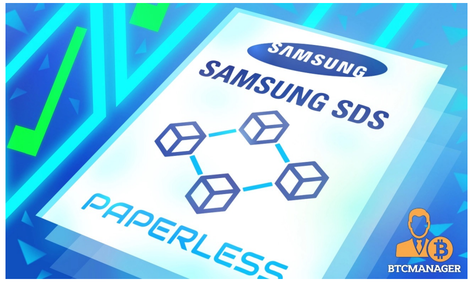


Source: Elliott Management PowerPoint presentation, June 18, 2015, http://www.fairdealforsct.com/present/.


SM5


SAMSUNG


SAMSUNG
SAMSUNG HEAVY INDUSTRIES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The World's Best
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think NEXT
SAMSUNG FIRE & MARINE INSURANCE
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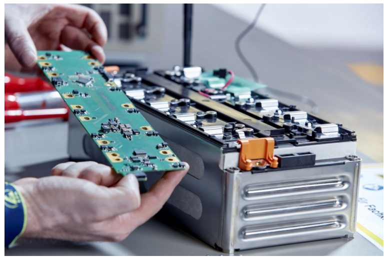


SAMSUNG
Galaxy Z Fold3 | Flip3 5G
Samsung
Hey there!

- Business groups provide a research setting to test the hypothesis:
  **Do business groups internalize externalities?
  **Do countries with business groups have relatively less environmental issues than other countries?

Should we entrust corporate governance in a handful of super rich?

Aristocratic oligarchy

Potential Concerns: Concentrated ownership & control

❖ **Anti competition effect**:

- Monopoly & monopsony issues (e.g., Azar et. Al. 2018)

❖ **Entrenchment**

- **Weaken governance** by institutional investors
- **Mis-allocation of corporate resources** for their own interests.
- Tunneling/ Enjoying private benefits (e.g., Bebchuk et al. 2000, Adams and Ferrira, 2008)

❖ **State capture**:

- Controlling a massive corporate empire amplifies controlling shareholders' political influence relative to their actual wealth. They could influence economic policy for their own interest (e.g., Morck, Woflenzon and Yeung, 2005).

Do controlling shareholders need to be incentivized to be pro social?

The controlling shareholder has most of his wealth in the firm(s) and hence should already have *long-term incentive*.

Responsible Shareholders

- The primary task is to define the “right” corporate purpose.

Shareholder <u>value</u> maximization VS. Shareholder <u>welfare</u> maximization

See e.g., Benabou and Tirole (2010), Hart and Zingales (2017; 2022), Barby et al. (2021), Mayer (2018, 2021), Bebchuk and Tallarita (2020), Edmans (2020).