

Unicorn company valuation and investor analysis

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Motivation

- “Unicorn startup” refers to a private company valued at or over \$1 billion
- The term “unicorn startup” (often shortened to just “unicorn”) was coined in 2013 by venture capitalist Aileen Lee.
- When Lee coined the term, there were 39 unicorns.

Motivation

- According to Get2Growth:
 - About 305 million startups are created annually.
 - About 472 million entrepreneurs in the world.
- According to 2019 Investopedia statistics, about 90% of newly created startups do not succeed.
- Of the startups that do succeed a very small number of them become Unicorns
- The elite club of Unicorns has its own elite
 - Unicorns vary greatly in value from \$1 to \$100 billion

Goals

- Of those companies that are Unicorns, what features impact their valuation?
- What can we learn about the investors who invest in Unicorns?

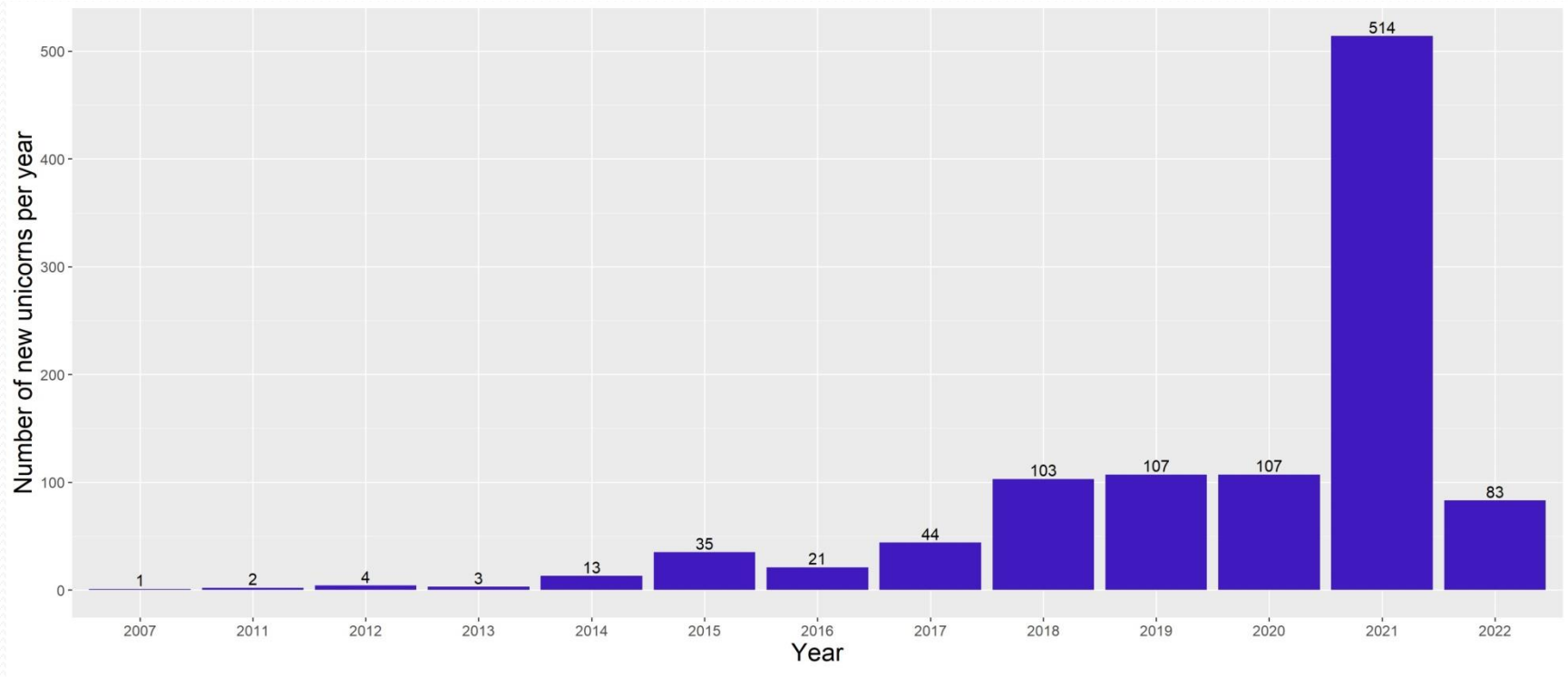
Dataset

- Data set:
<https://www.kaggle.com/datasets/deepcontractor/unicorn-companies-dataset>
- 1,037 Unicorns
- 13 Features

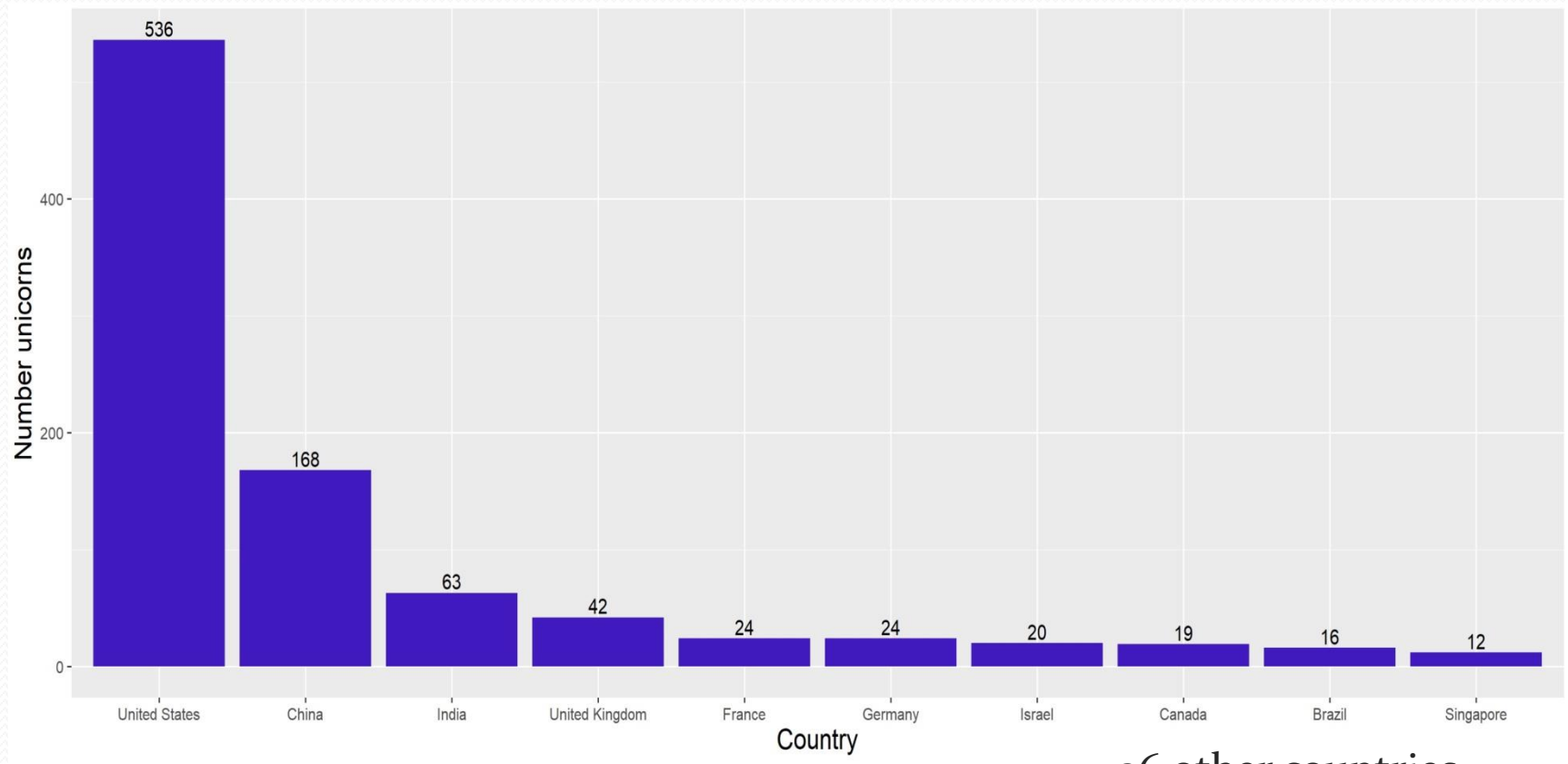
Features

- Company
- Valuation in billions
- Date joined
- Country
- City
- Industry
- Investors
- Year founded
- Total raised
- Financial stage
- Investors count
- Deal terms
- Portfolio exits

Number of new unicorns per year

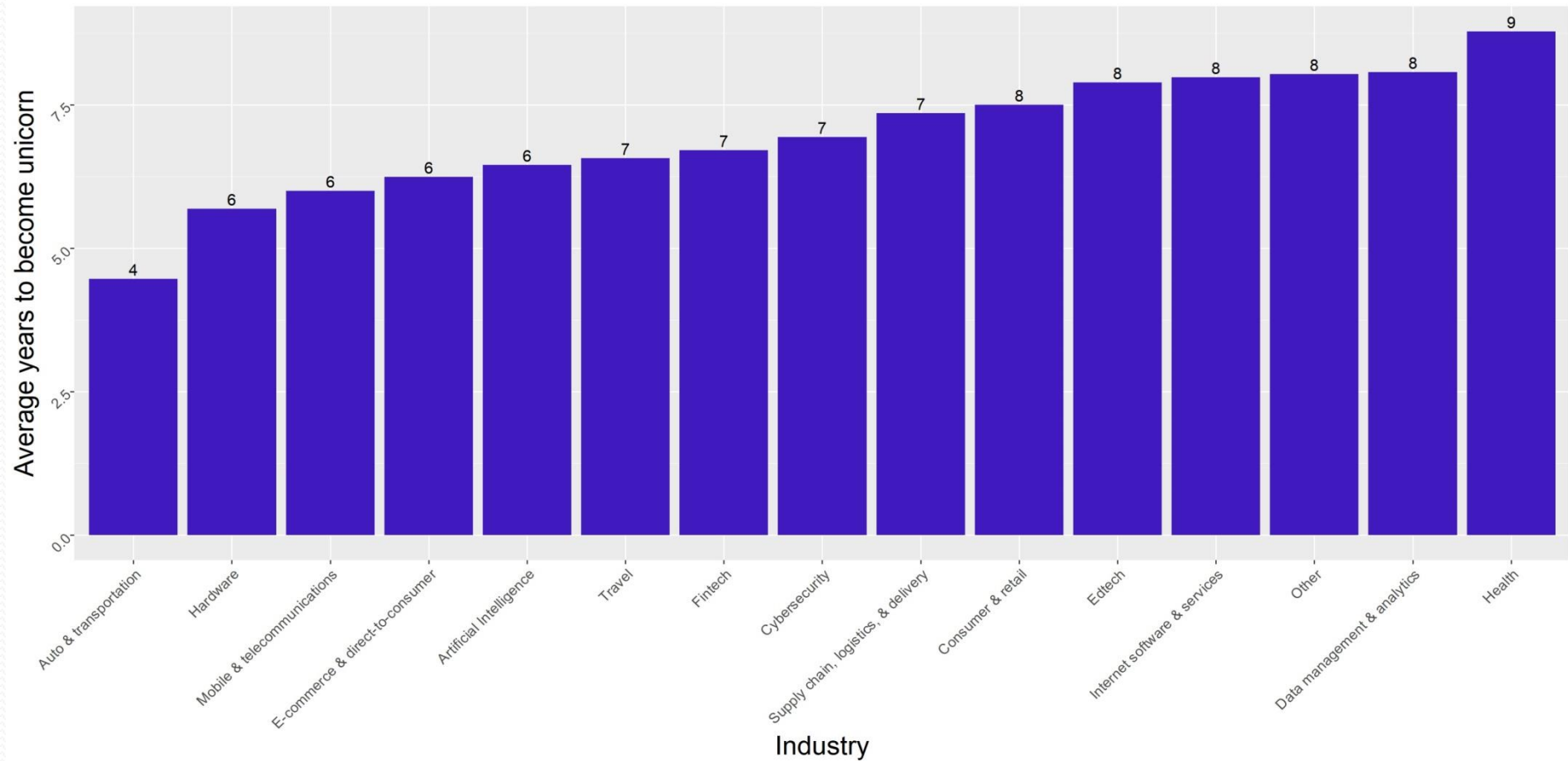


Unicorns per country (top ten)

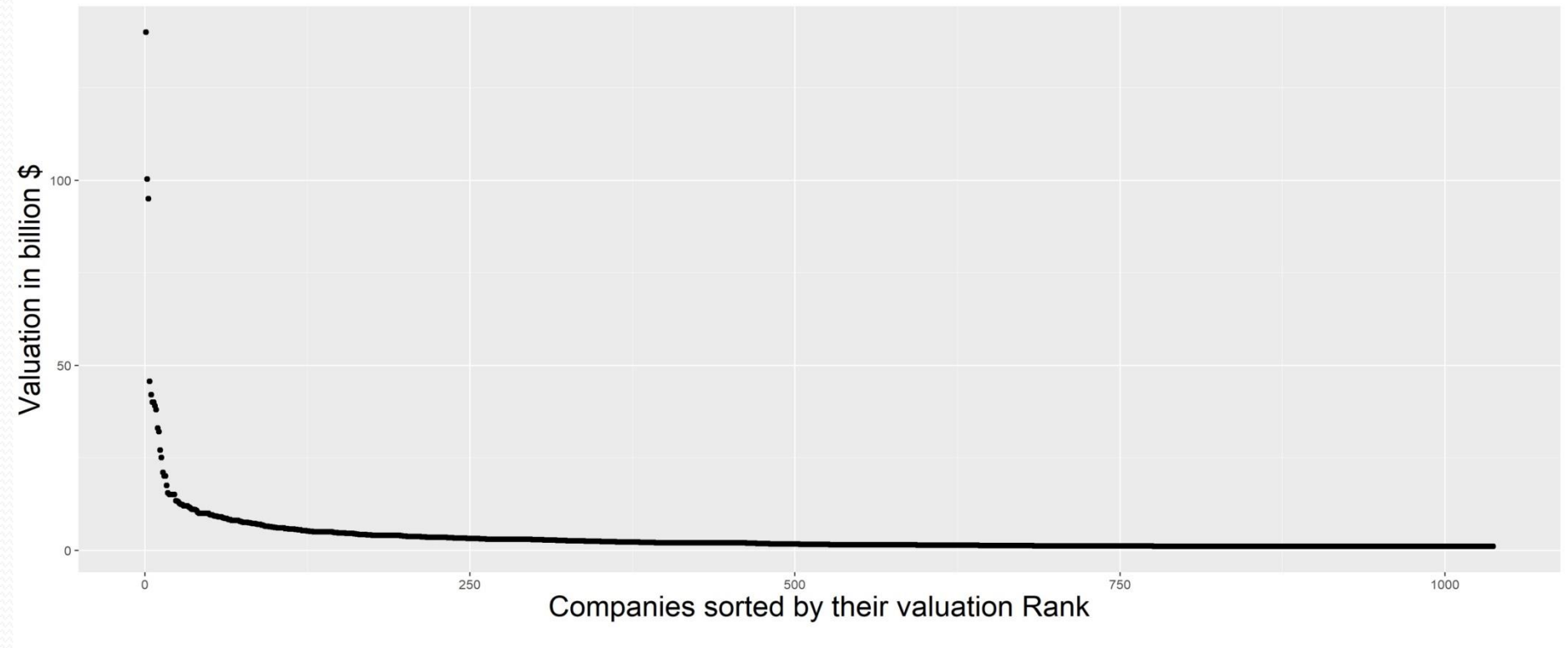


36 other countries
Number of Unicorns: 113

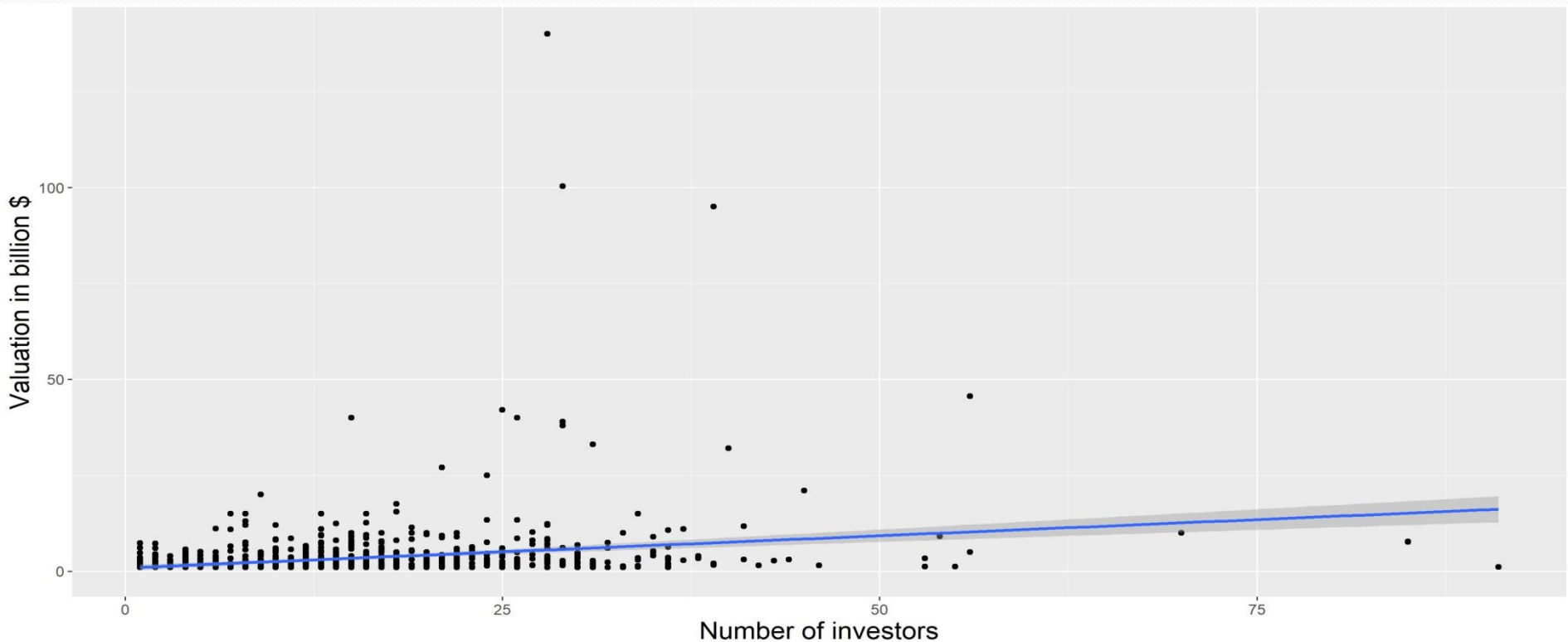
Industry



Valuation



Valuation versus Number of Investors



$$\text{Valuation} = \$167 \text{ million} * (\text{number of investors}) + \$86 \text{ million}$$

Multi-variable analysis

- Analysis of **number of investors** and **years since founding** on the valuation of the company.

All unicorns

Valuation = \$185 million * (# of investors) + \$136 million * (years since founding) – \$640 million

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 - The U.S. and China have different political and economic systems, which we would expect to impact startup valuations.

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U.S. unicorns

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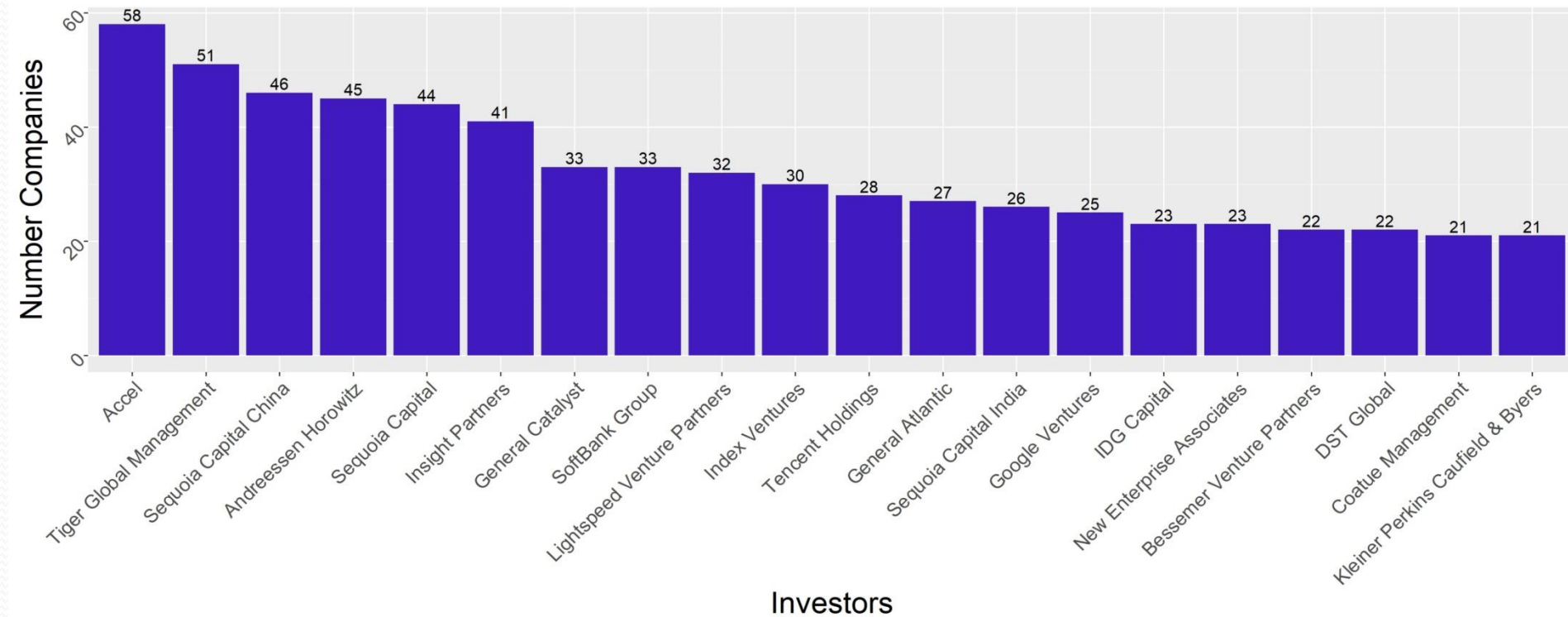
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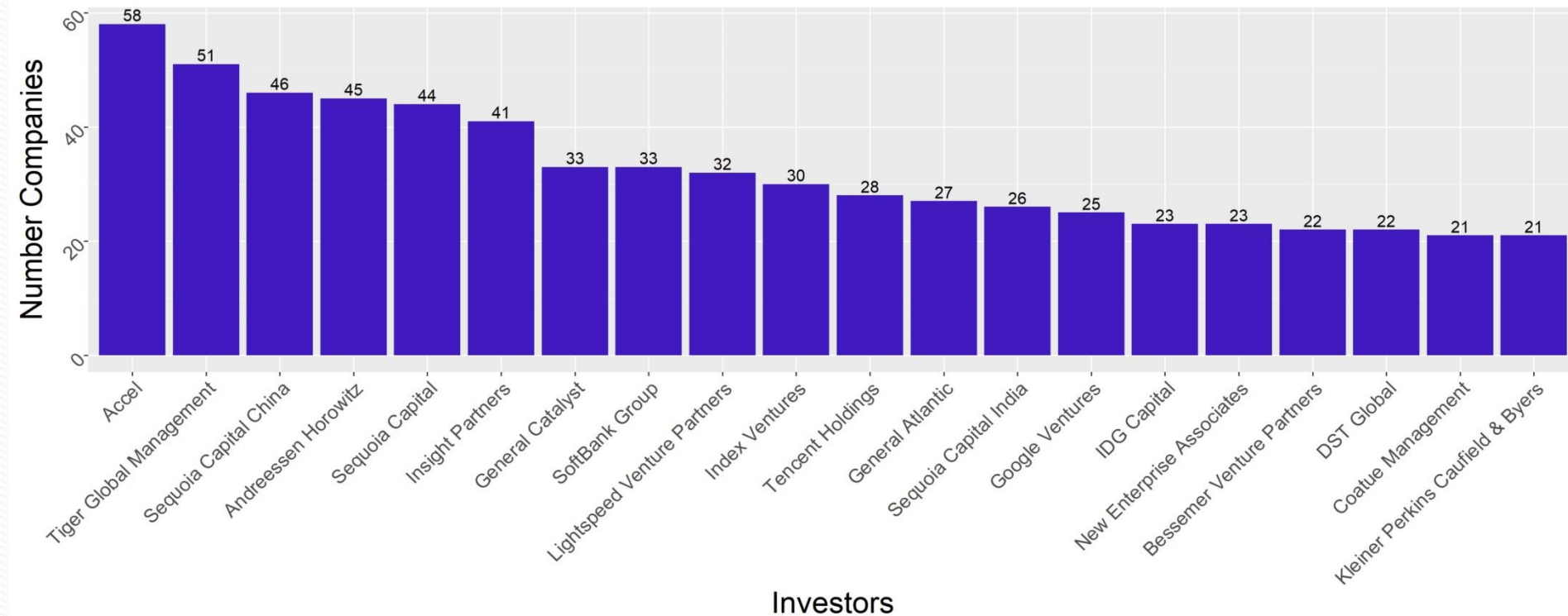
China unicorns

Valuation = \$234 million * (# of investors) + \$170 million * (years since founding) – \$1.17 billion

The top 20 unicorn investors



The top 20 unicorn investors



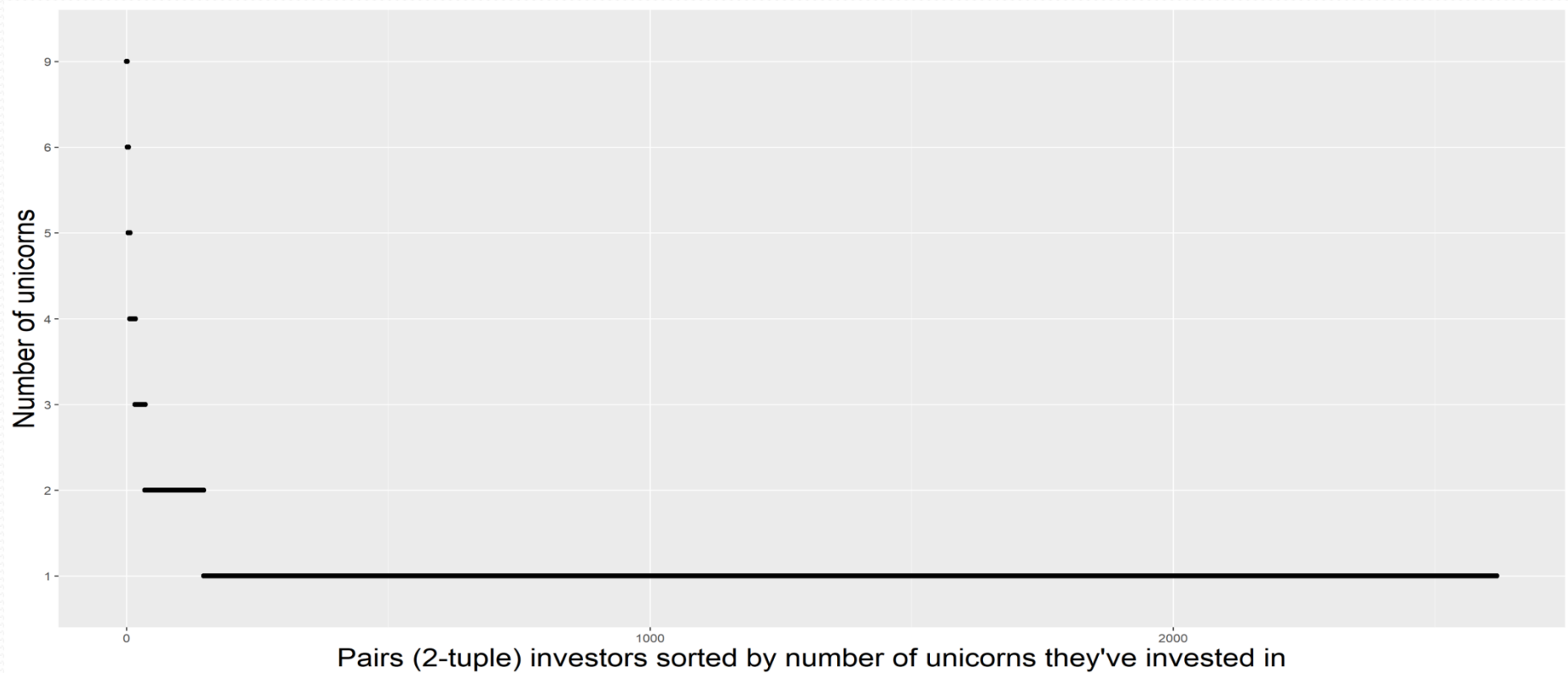
Total number of investors = 1231

828 investors (67% of all investors) have only invested in one unicorn

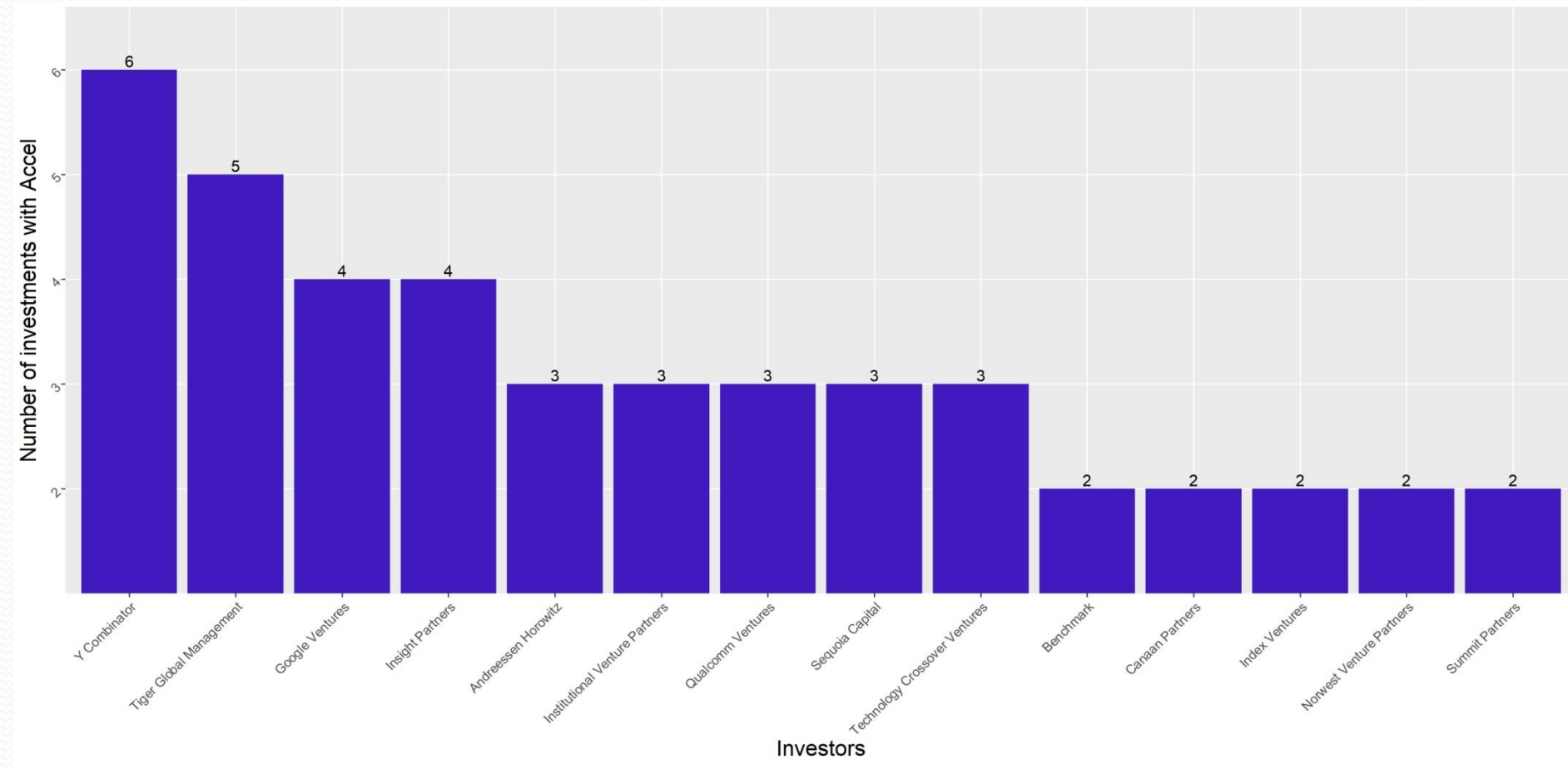
To what degree do groups of investors invest in the same companies?

- Motivation:
 - If an entrepreneur gets one investor what other investors are they likely to get as well?
- n-Tuple
 - (Investor₁, Investor₂,..., Investor_n)
 - Number of unicorn companies they invested together.

Investor analysis (2-tuple)



Investor analysis (2-tuple) for Accel



Investor analysis (3-tuple)



Key conclusions & future work

- Key conclusions
 - The most important factor for predicting valuation depends upon the country
 - USA: years since founding
 - China: number of investors
 - Unicorn company CEO's should use 2-tuple analysis to find their next investor
- Future work:
 - Extend analysis to high value (over \$100 million) startups.