



# SPARK INVESTMENT CASE STUDY

## SUBMISSION

### **Group Members:**

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3. Nithya V

## Our Understanding

### Business Problem

- Identify best Sectors, countries
- Ideal investment type

### Strategy

- Invest where others are investing

### Constraints

- Investment between 5 to 15 Million USD per round
- Invest only in English speaking countries

### Data Analysis Goal

- Investment Type Analysis
- Country Analysis
- Sector Analysis

## Our Approach

### Import

- Import data from various sources
- Files imported – companies.txt, rounds2.csv and mapping.csv

### Understanding

- Inspecting the data and understanding the relevant fields and structure of data
- Reviewing the data in context of business problem and constraints

### Preparation

- Data cleaning – removing null value, foreign texts, rectifying typos, etc.,
- Merging/ joining data for analysis (companies and rounds to get company, country and funding type info and finally with mapping to get sector wise info)

### Analysis

- Perform analysis based on constraints provided.
- Investment, Country and Sector analysis performed

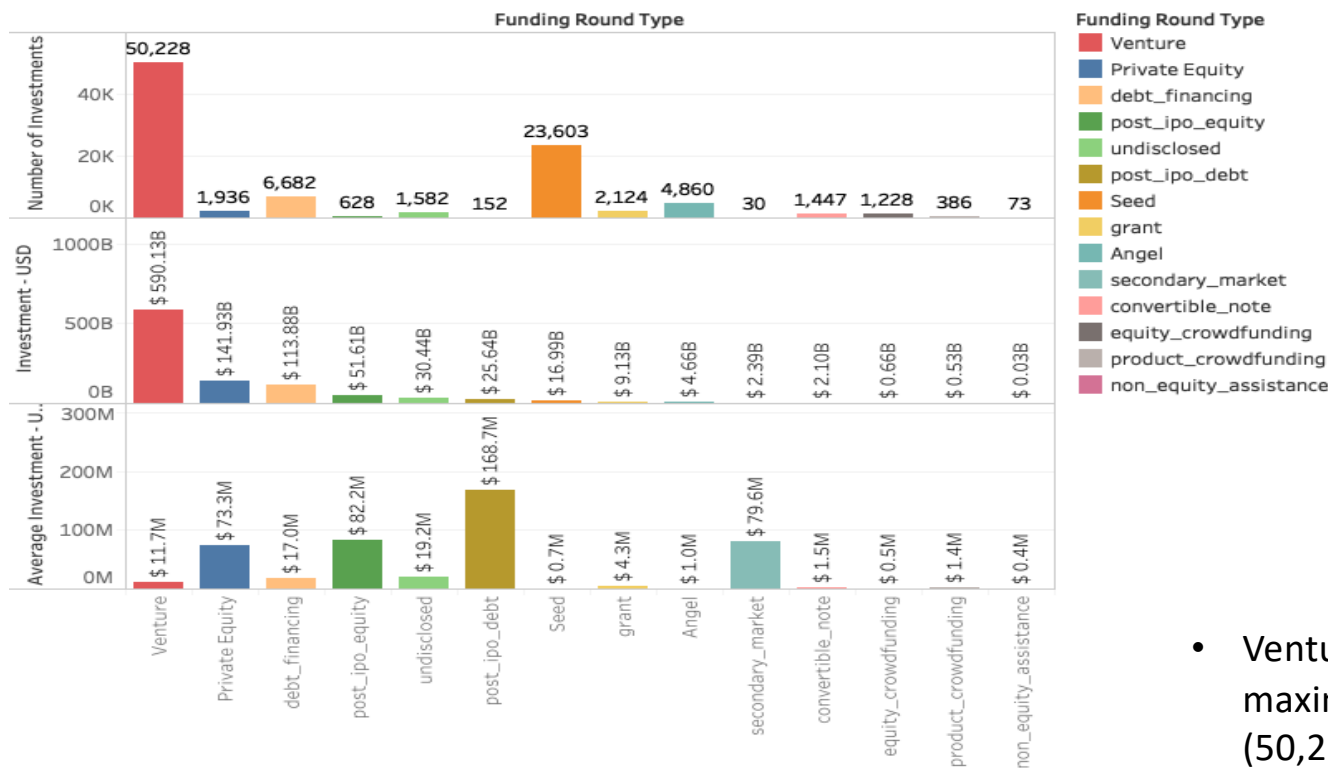
### Communication

- Visualizing the analysis to aid in decision making and support in communication
- Preparation of presentation to explain thought process, approach and conclusion

Software Tools - Python and Tableau

# Investment Type Analysis

Investment Analysis



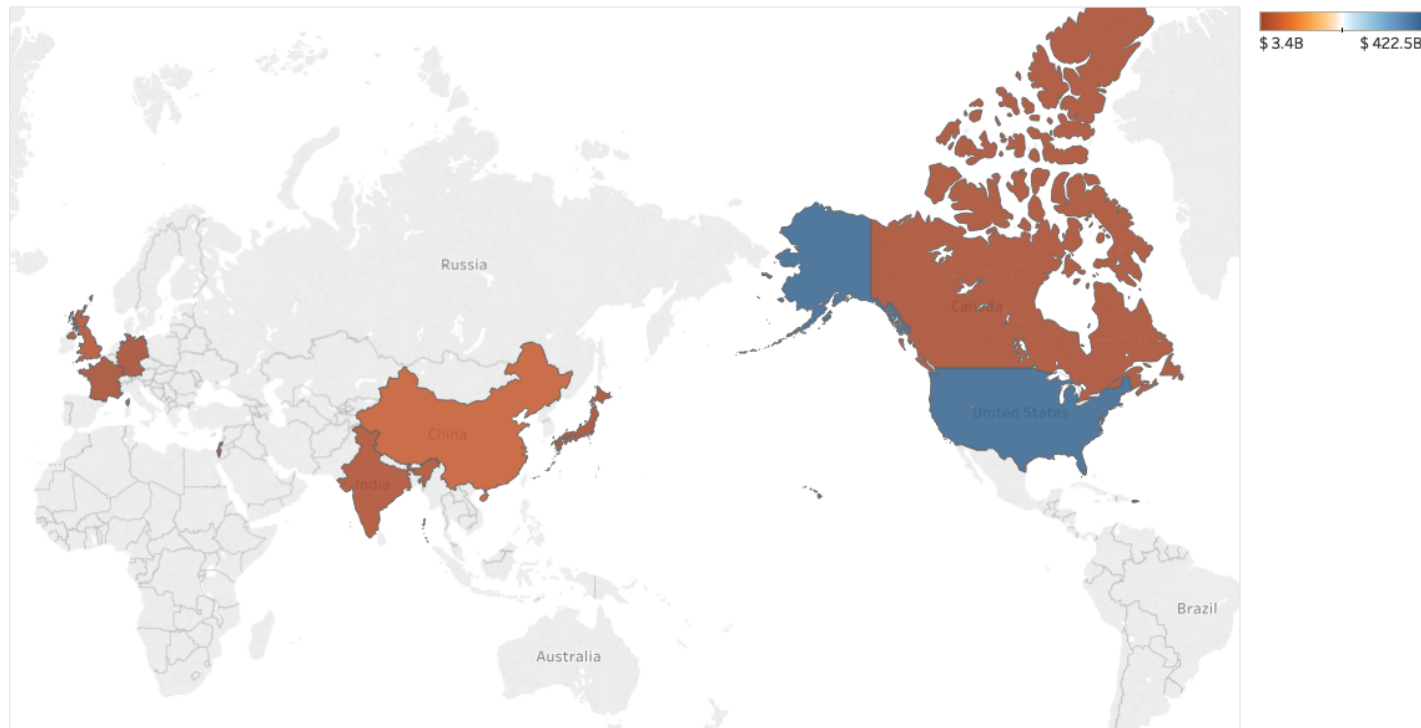
Investment Analysis

Funding Round Type	Raised USD	Number of Investments	Avg. Raised Amount Usd
Venture	\$ 590.13B	50,228	\$ 11.7M
Seed	\$ 16.99B	23,603	\$ 0.7M
debt_financing	\$ 113.88B	6,682	\$ 17.0M
Angel	\$ 4.66B	4,860	\$ 1.0M
grant	\$ 9.13B	2,124	\$ 4.3M
Private Equity	\$ 141.93B	1,936	\$ 73.3M
undisclosed	\$ 30.44B	1,582	\$ 19.2M
convertible_note	\$ 2.10B	1,447	\$ 1.5M
equity_crowdfunding	\$ 0.66B	1,228	\$ 0.5M
post_ipo_equity	\$ 51.61B	628	\$ 82.2M
product_crowdfunding	\$ 0.53B	386	\$ 1.4M
post_ipo_debt	\$ 25.64B	152	\$ 168.7M
non_equity_assistance	\$ 0.03B	73	\$ 0.4M
secondary_market	\$ 2.39B	30	\$ 79.6M

- Venture Investment Type has attracted maximum investment of USD 590 Billion (50,228 number of investments)
- The average investment of venture is USD 11.7 million which is within the constraint

# Country Type Analysis

Country Analysis for Investment Type - Venture



Top 9 Countries for Investment Type - Venture

Country Code	Number of Investments	Raised USD
USA	36,139	\$ 422.5B
CHN	1,564	\$ 39.8B
GBR	2,055	\$ 20.2B
IND	824	\$ 14.4B
CAN	1,256	\$ 9.6B
FRA	917	\$ 7.3B
ISR	796	\$ 6.9B
DEU	558	\$ 6.3B
JPN	274	\$ 3.4B

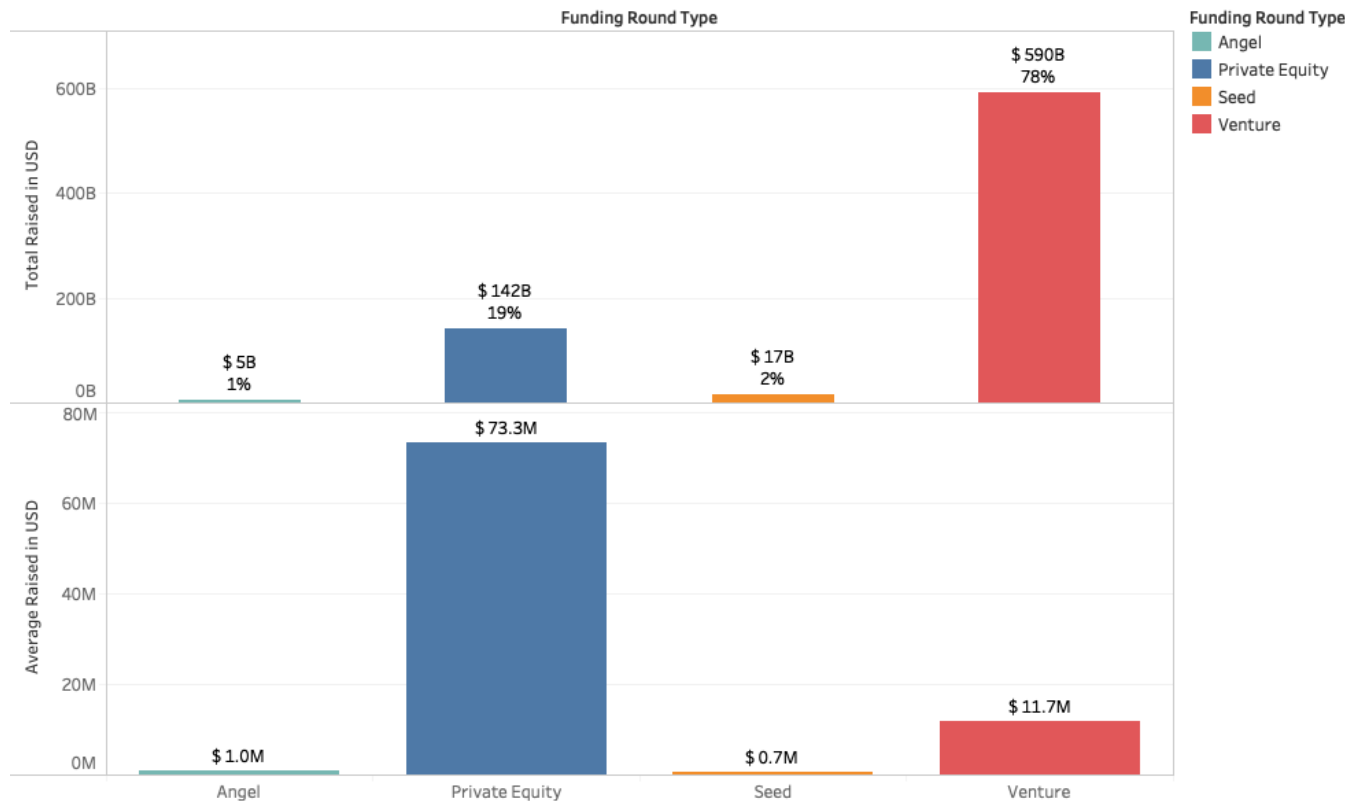


## Sector Analysis for Top 3 Countries and Venture Investment Type

Country Co..	Sector	
USA	Others	2,950
	Social, Finance, Analytics, Advertising	2,714
	Cleantech / Semiconductors	2,300
	News, Search and Messaging	1,582
	Health	909
	Manufacturing	799
	Entertainment	591
	Automotive & Sports	167
	Blanks	86
	Others	147
GBR	Social, Finance, Analytics, Advertising	133
	Cleantech / Semiconductors	128
	News, Search and Messaging	73
	Health	24
	Manufacturing	42
	Entertainment	56
	Automotive & Sports	16
	Blanks	7
	Others	110
	Social, Finance, Analytics, Advertising	60
IND	Cleantech / Semiconductors	20
	News, Search and Messaging	52
	Health	19
	Manufacturing	21
	Entertainment	33
	Automotive & Sports	13
	Blanks	2
	Others	60
	Social, Finance, Analytics, Advertising	20
	Cleantech / Semiconductors	20

The analysis shows the top sectors based on number of investments for chosen countries for the constraints given and chosen investment type and country.

## Investment Type Analysis (Checkpoint 6 – Plot 1)



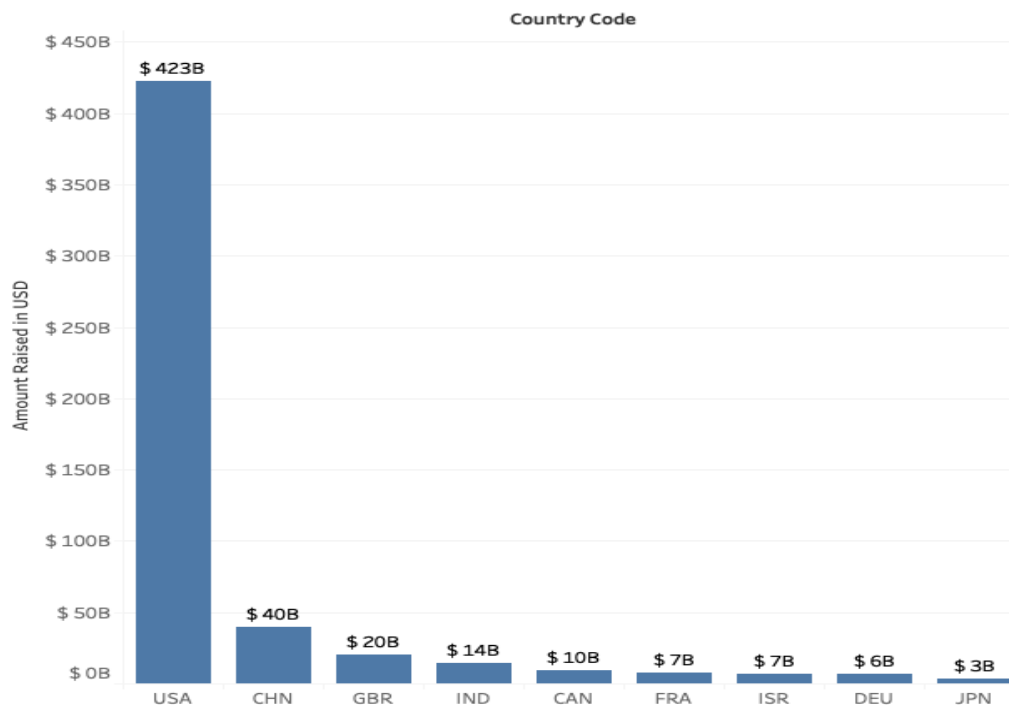
Sum of Raised Amount Usd and average of Raised Amount Usd for each Funding Round Type. Color shows details about Funding Round Type. For pane Sum of Raised Amount Usd: The marks are labeled by sum of Raised Amount Usd and % of Total Raised Amount Usd. For pane Average of Raised Amount Usd: The marks are labeled by average of Raised Amount Usd. The view is filtered on Funding Round Type, which keeps Angel, Private Equity, Seed and Venture.

We recommend Spark Funds to choose Investment Type “Venture” among Angel, Private Equity, Seed and Venture, as, Venture has :

- maximum investment of \$ 590 Billion and also constitutes 79% of investment,
- an average investment of \$ 11.7 million, which is between the preferred investment range of 5 to 15 Million USD

## Country Analysis (Checkpoint 6 – Plot 2)

Top 9 Countries vs Total Investment for Investment Type - Venture



Sum of Raised Amount Usd for each Country Code. The marks are labeled by sum of Raised Amount Usd. The data is filtered on Rank of Raised Amount Usd and Funding Round Type. The Rank of Raised Amount Usd filter ranges from 1 to 9. The Funding Round Type filter keeps Venture. The view is filtered on Country Code, which keeps 97 of 135 members.

Top 3 Countries



Funding  
Type –  
Venture  
(FT)



Maximum  
investment  
for chosen  
FT

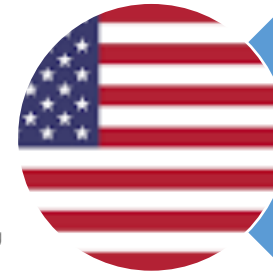
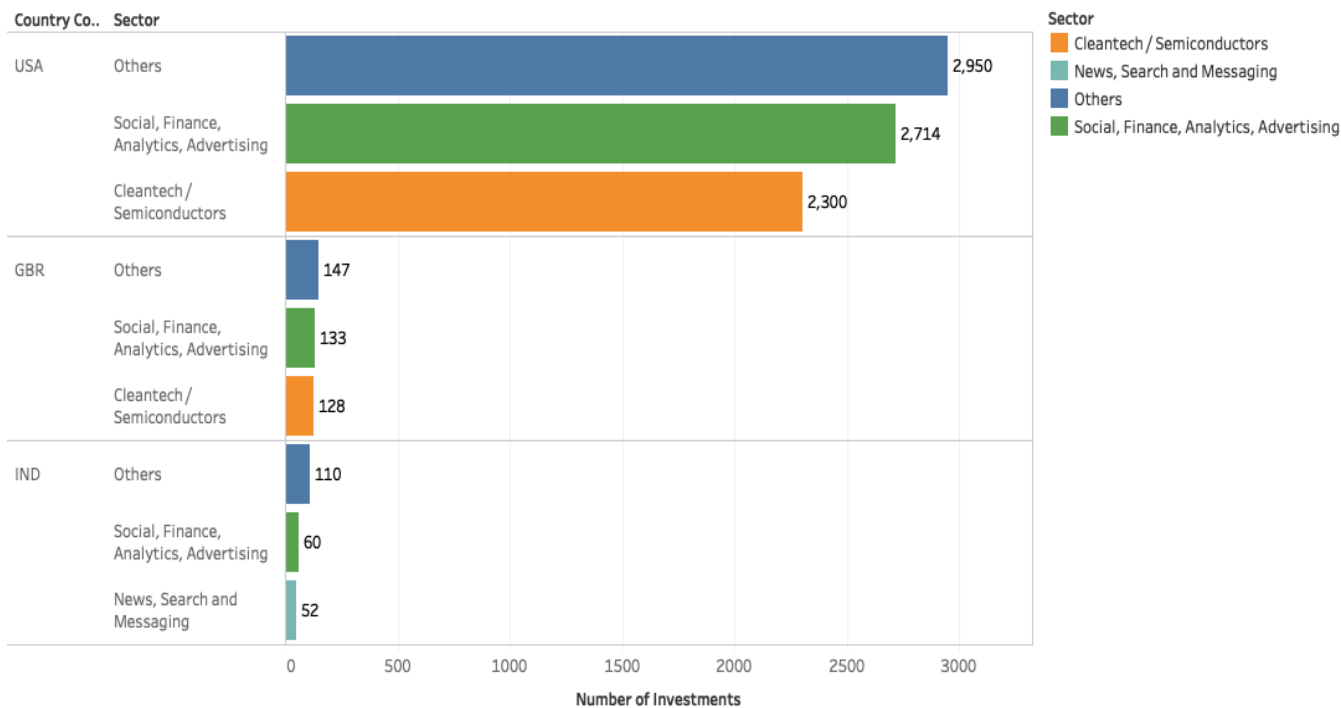


English is  
official  
language



## Sector Analysis (Checkpoint 6 – Plot 3)

Top 3 Country vs Sector Based on Venture



1. Others
2. Social, Finance, Analysis and Advertising
3. Cleantech/ Semiconductors



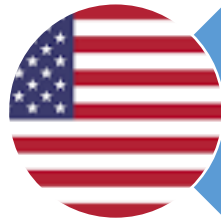
1. Others
2. Cleantech/ Semiconductors
3. Social, Finance, Analysis and Advertising



1. Others
2. Social, Finance, Analysis and Advertising
3. News, Search and Messaging

## Conclusion

### Funding Type “Venture”



1. Others
2. Social, Finance, Analysis and Advertising
3. Cleantech/ Semiconductors



1. Others
2. Social, Finance, Analysis and Advertising
3. Cleantech/ Semiconductors



1. Others
2. Social, Finance, Analysis and Advertising
3. News, Search and Messaging