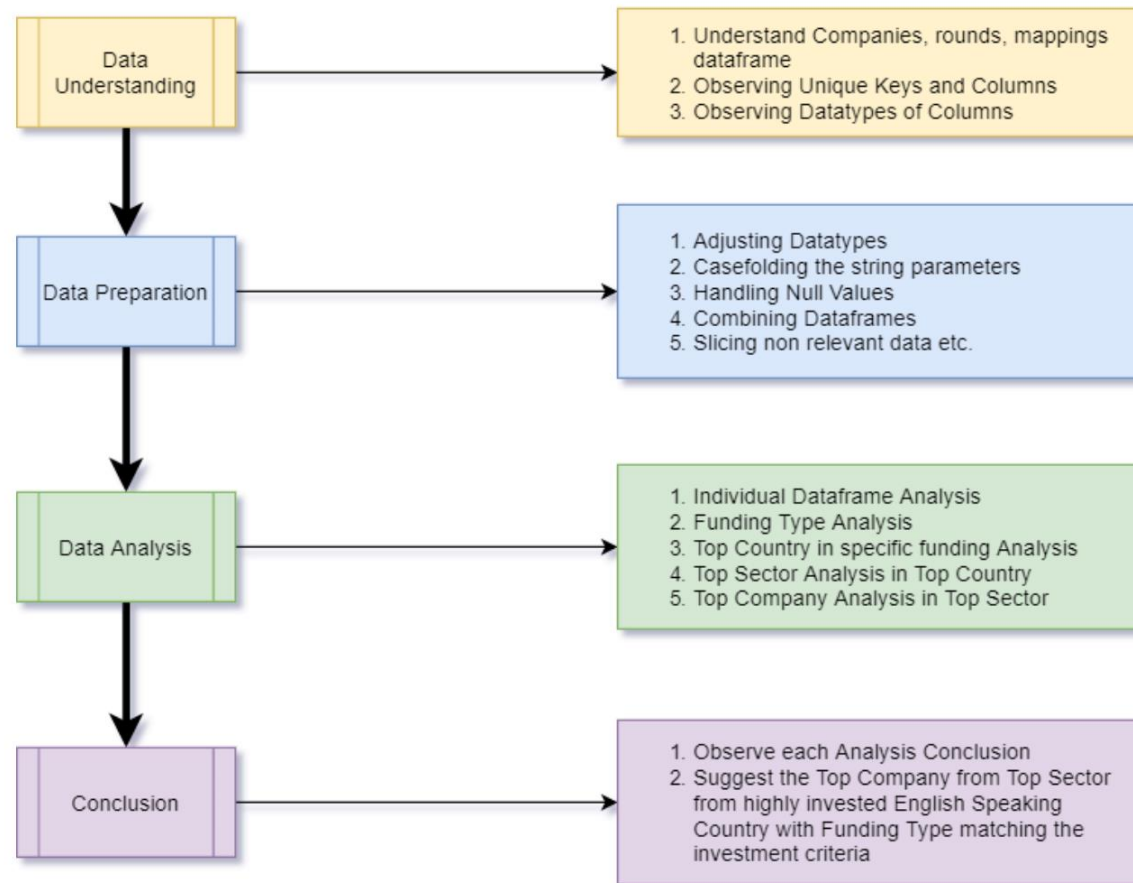# Investment Analysis

By: Pooja Reddy Karnati

Objectives

- SPARK FUNDS is an asset management company who want to make investments in other companies.

- Their Investment criteria is:

  1. The investment should be made to a Firm that is in English Speaking Country

  2. Investment range is between 5 Million to 15 Million.

- Objective is to suggest the best viable company suitable for SPARK FUNDS Investment criteria.

Problem Solving Methodology

Analysis – Best Investment Funding Type

- Casefold Companies Unique Key and Round Funding Unique Key

- Combine Both DataFrames to create Master DataFrame

- Select the Data where investment type is "seed", "venture", "angel", private equity"

- Group by Investment Type on the selected dataframe and check the average and median investment value on each of these 4-investment type

- Spark Funds criteria of Investment is 5M-15M.

- Check the Investment type which fits in SPARK FUNDS criteria

- We can find venture investment type fits the criteria of SPARK FUNDS and other types do not.

- From this First Step, we arrived at a Conclusion that "Venture" type investment is suitable for SPARK FUNDS.

Analysis - Best Venture Investment Countries

- As best Investment type is found out, we move on to select the entries belonging to venture type.
- Our next goal is to find out the country where we have highest amount of venture type investments.
- So, we group the data by Country and aggregate the investments by sum and count.
- After observing the results, we can find USA,CHN,GBR,IND,CAN are in Top 5 countries where venture investment is most
- But as SPARK FUNDS only considers investing in English speaking countries, USA, GBR, CAN are
- Top 3 English Speaking Countries in in terms of highest venture investment.

Britain

main_sectors	Count	Sum
OTHERS	143	1.249124e+09
CLEANTECH / SEMICONDUCTORS	127	1.136905e+09
SOCIAL, FINANCE, ANALYTICS, ADVERTISING	98	8.218884e+08

USA

main_sectors	Count	Sum
OTHERS	2923	2.608928e+10
CLEANTECH / SEMICONDUCTORS	2297	2.118100e+10
SOCIAL, FINANCE, ANALYTICS, ADVERTISING	1912	1.668070e+10

Canada

main_sectors	Count	Sum
CLEANTECH / SEMICONDUCTORS	112	1.015888e+09
OTHERS	109	9.261380e+08
SOCIAL, FINANCE, ANALYTICS, ADVERTISING	52	4.433431e+08

Analysis - Best Sector in Top Countries

- After deciding the countries and investment type, let us find out the best sector to invest

- Before moving to analysis, we have to create a derived column of main sectors from primary sectors using the SPARK FUNDS business logic

- As main sectors column is created in master dataframe, we can group the data by main sectors and check the highest number of investments.

- This analysis on all three countries to check the best sectors to invest in each country.
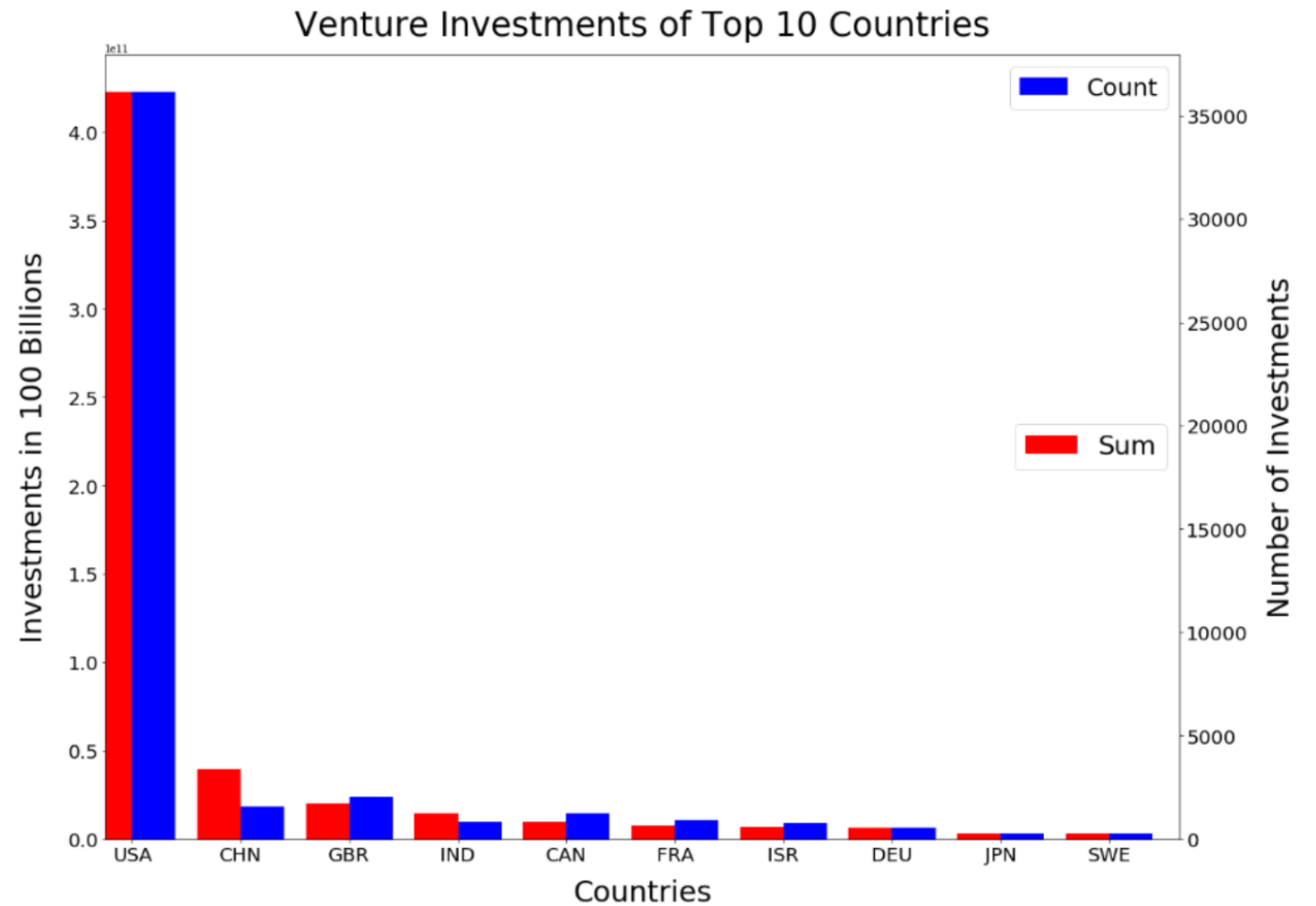
Suitable Funding Type = "Venture"

1. Angel < 5M

2. Seed < 5M

3. Private equity > 15M

4. 5M < Venture < 15M

Investments per Funding Type in 15 Million Range
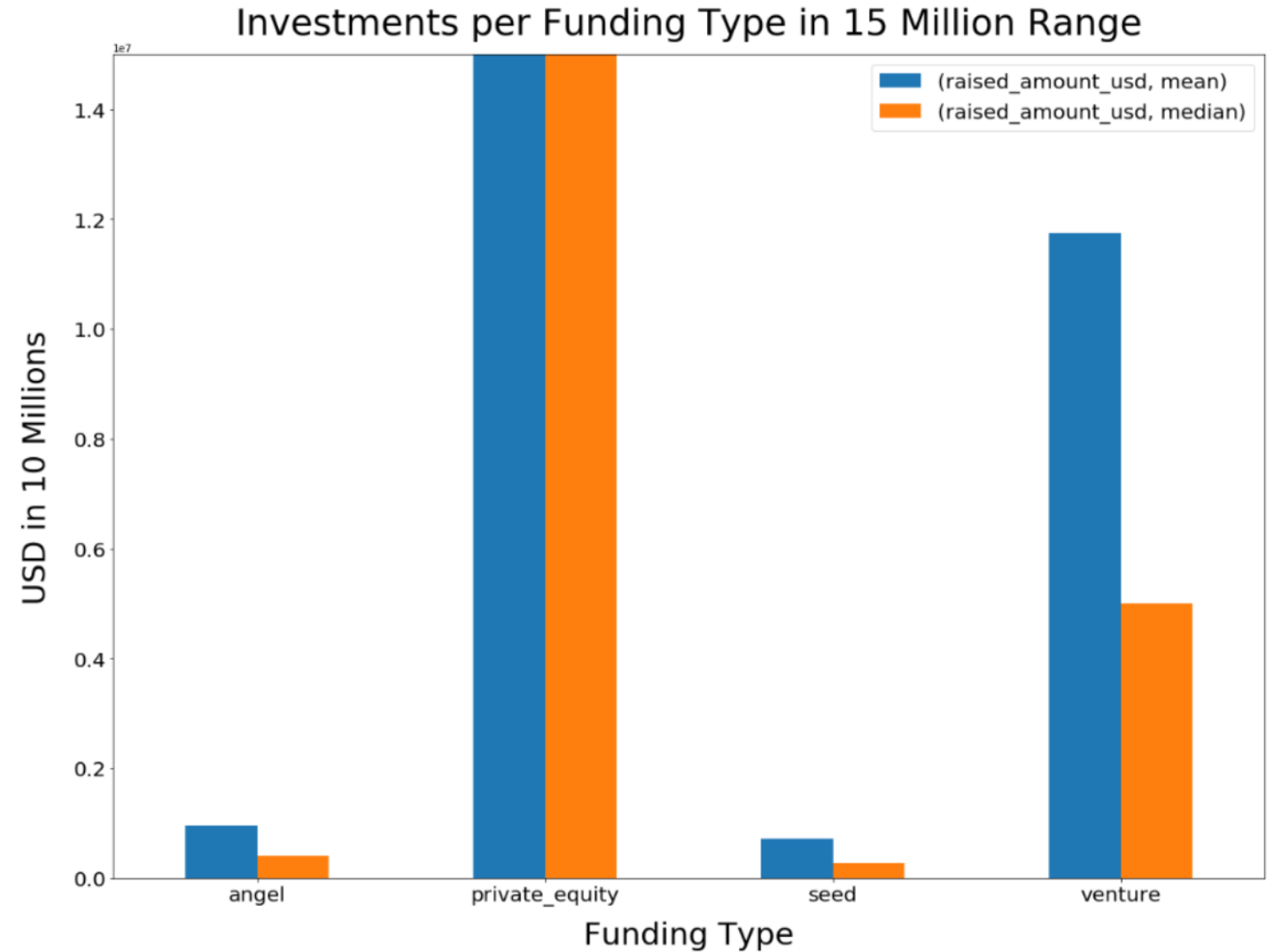
Best English Countries to Invest = USA, GBR, CAN

- USA = United States
- CHN = China
- GBR = Great Britain
- IND = India
- CAN = Canada
- FRA = France
- ISR = Israel
- DEU = Germany
- JPN = Japan
- SWE = Sweden

Venture Investments of Top 10 Countries

Best Main Sectors to Invest in USA, GBR, CANADA

- "C/S" -> "CLEANTECH / SEMICONDUCTORS"

- "S/F/AN/AD" -> "SOCIAL, FINANCE, ANALYTICS, ADVERTISING"

Top 3 Highly Invested Sectors of USA, GBR, CANADA
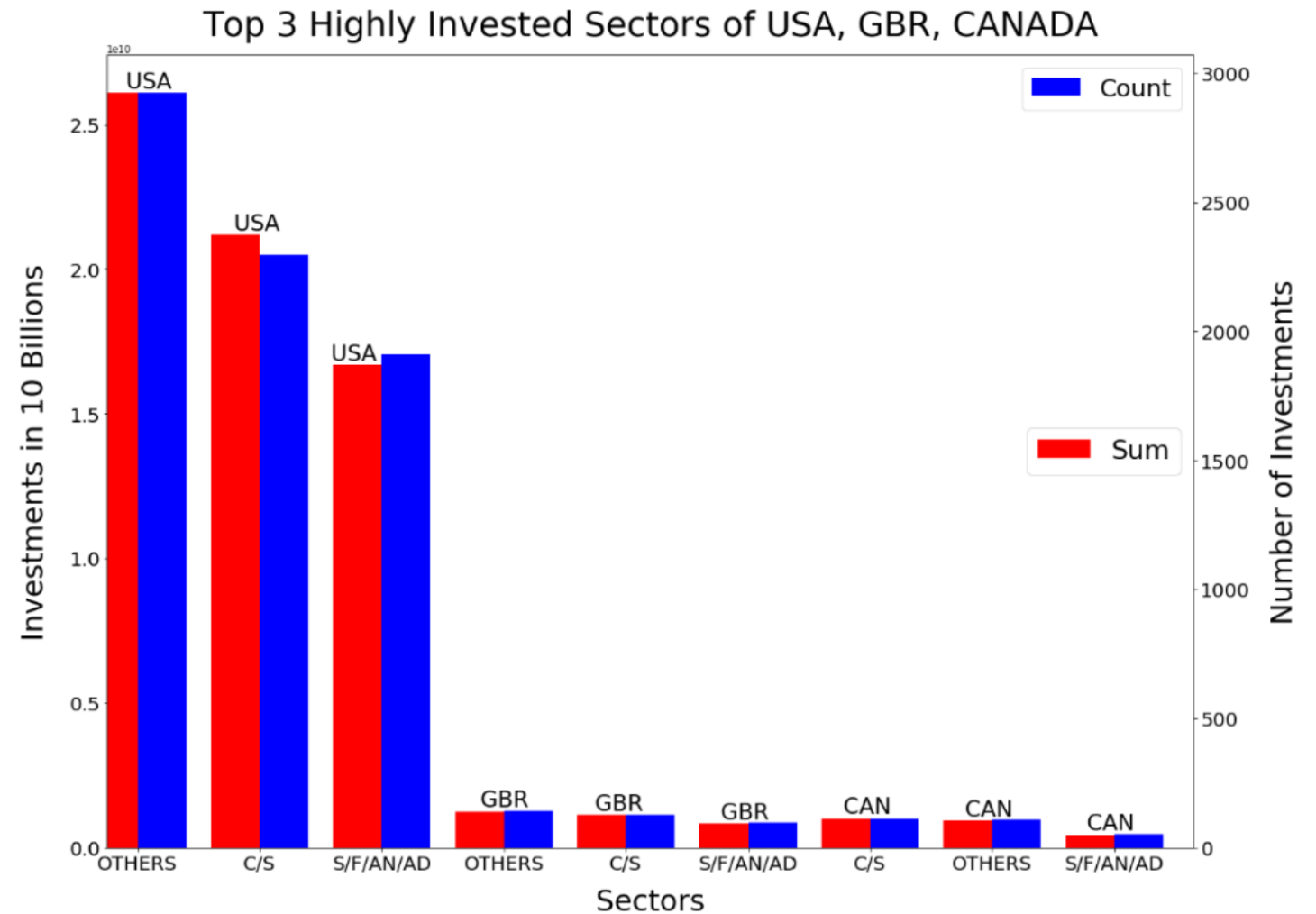
Conclusion

- Investment Type:
  - VENTURE

- Countries:
  1. USA,
  2. GBR,
  3. CAN

- Sectors:
  - OTHERS
  - CLEANTECH / SEMICONDUCTORS
  - SOCIAL, FINANCE, ANALYTICS, ADVERTISING

- Companies Recommended:
  - REFER TO THE TABLE

Country	Main Sector	Company	Count	Sum
USA	OTHERS	Virtustream	6	64300000
		Capella Photonics	6	54968051
		Black Duck Software	6	51000000
	CLEANTECH / SEMICONDUCTORS	Biodesix	8	75300000
		Tigo Energy	8	68739496
		ForSight Labs	8	61300001
GBR	OTHERS	Electric Cloud	4	37000000
		SenSage	4	36250000
		Enigmatec	3	32500000
	CLEANTECH / SEMICONDUCTORS	EUSA Pharma	3	35600000
		Horizon Discovery	3	31353719
		F-star Biotechnology Limited	3	29132906
CAN	CLEANTECH / SEMICONDUCTORS	Fresco Microchip	4	48000000
		Ostara	4	43152682
		Diablo Technologies	3	35500000
	OTHERS	QuickPlay Media	3	38700000
		NewStep Networks	3	31477853
		Strangeloop Networks	2	21500000