



INVESTMENT CASE STUDY SUBMISSION

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Business Objective

Spark Funds, an <u>asset management company</u> wants to make investments in a few companies. The CEO of Spark Funds wants to understand the global trends in investments so that he/she can take the investment decisions effectively.

Spark Funds has two minor constraints for investments:

- It wants to invest between **5 to 15 million USD** per round of investment
- It wants to invest only in **English-speaking countries** because of the ease of communication with the companies it would invest in

The objective of this case study is to identify the best sectors, countries, and a suitable investment type for making investments. The overall strategy is to invest where others are investing, implying that the 'best' sectors and countries are the ones 'where most investors are investing'.





Problem solving methodology

Getting and Cleaning Data

- 1. Getting data from delimited files
- 2. Identify missing data in data frames and treating (delete or impute) missing values which involve a long process of carefully examining the percentage of missing values in rows and columns and then deciding whether to delete it or impute it with the mean value.

Investment type Analysis

Comparing the typical investment amounts in the venture, seed, angel, private equity etc. so that Spark Funds can choose the type that is best suited for their strategy.

Country analysis

Identifying the English speaking countries which have been the most heavily invested in the past. These will be Spark Funds' favorites as well.

Sector analysis

Understanding the distribution of investments across the eight main sectors.





Investment type Analysis

Average Values of Investments for Each of these Funding Types

#	Questions	Answer			
1	Average funding amount of venture type	\$10,730,346.61			
2	Average funding amount of angel type	\$782,590.75			
3	Average funding amount of seed type	\$591,227.26			
4	Average funding amount of private equity type \$63,993,398.				
5	Considering that Spark Funds wants to invest between 5 to 15 million USD per investment round, which investment type is the most suitable for them?	Venture			





Country Analysis

Analyzing the Top 3 English-Speaking Countries					
#	Questions	Answers			
1	Top English speaking country	USA			
2	Second English speaking country	GBR			
3	Third English speaking country	IND			





Sector Analysis

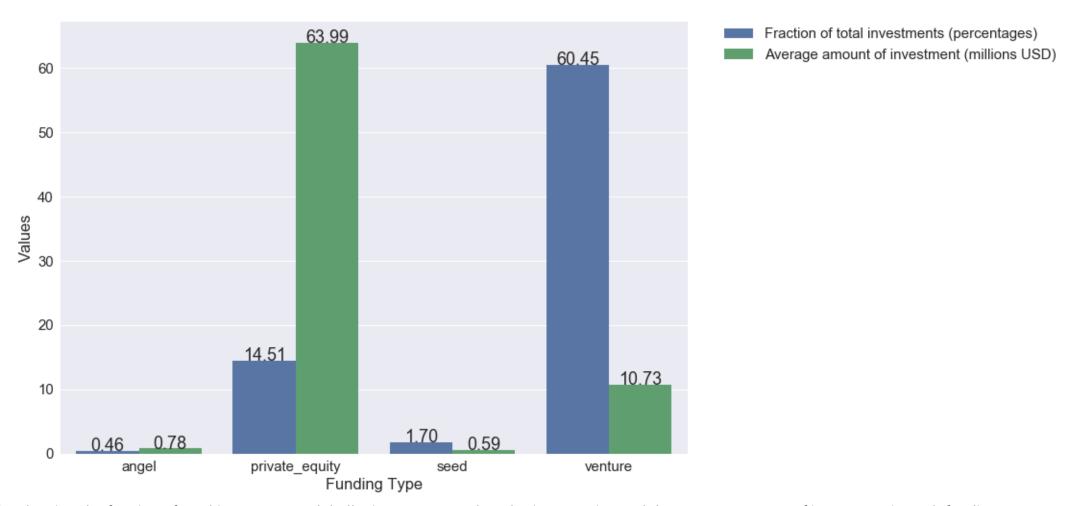
	Sector-wise Investment Analysis							
#	Questions	USA	GBR	IND				
1	Total number of Investments (count)	12064	621	328				
2	Total amount of investment (USD)	107766584223.00	5379078691.00	2949543602.00				
3	Top Sector name (no. of investment-wise)	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising				
4	Second Sector name (no. of investment-wise)	Cleantech / Semiconductors	Cleantech / Semiconductors	News, Search and Messaging				
5	Third Sector name (no. of investment-wise)	News, Search and Messaging	News, Search and Messaging	Entertainment				
6	Number of investments in top sector (3)	2766	135	60				
7	Number of investments in second sector (4)	2300	128	52				
8	Number of investments in third sector (5)	1582	73	33				
9	For point 3 (top sector count-wise), which company received the highest investment?	/ORGANIZATION/SHOTSPOTTER	/ORGANIZATION/CELLTICK- TECHNOLOGIES	/ORGANIZATION/MANTHAN-SYSTEMS				
10	For point 4 (second best sector count-wise), which company received the highest investment?	/ORGANIZATION/BIODESIX	/ORGANIZATION/EUSA-PHARMA	/ORGANIZATION/GUPSHUP-TECHNOLOGY-INDIA-PVT- LTD				

Note: Removing 'Others' sector which is ranked 1 for top 3 countries (USA,GBR and IND) assuming it's a generalized sector and considering next top 3.





Investment type Analysis (Data Visualisation)

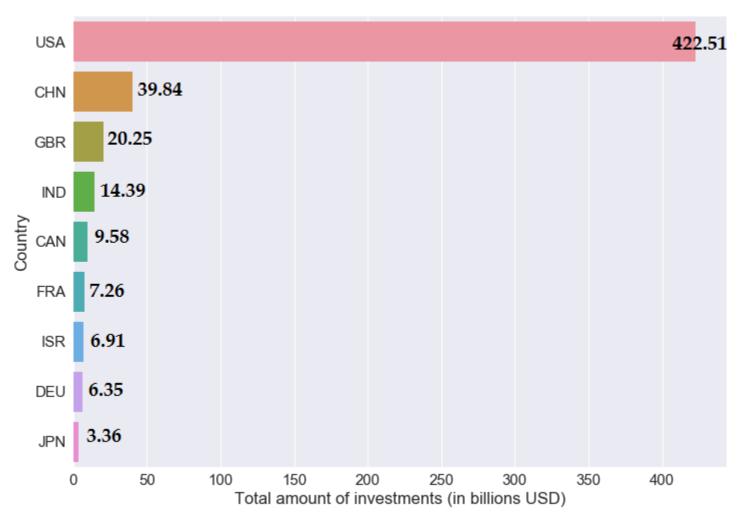


Plot 1: Plot showing the fraction of total investments (globally) in venture, seed, and private equity, and the average amount of investment in each funding type.





Country Analysis (Data Visualisation)



Plot 2: Plot showing the top 9 countries against the total amount of investments of funding type FT

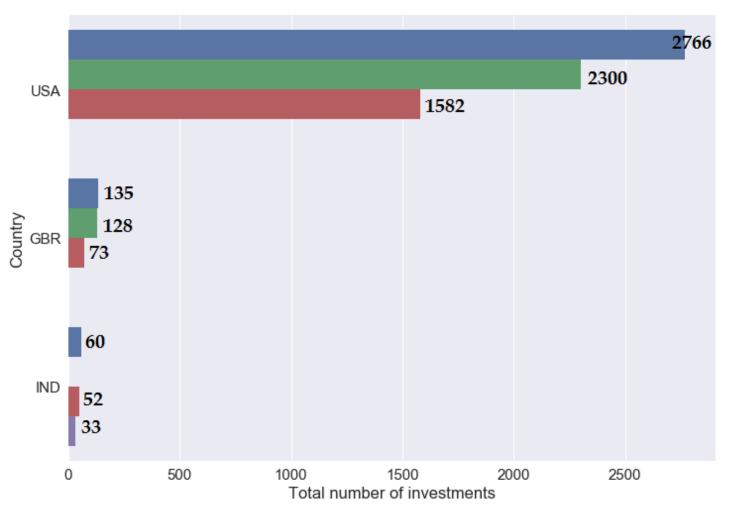




Social, Finance, Analytics, Advertising

Cleantech / Semiconductors News, Search and Messaging

Sector Analysis (Data Visualisation)



Top 3 English-Speaking Countries

S.no Country

1 USA
2 GBR
3 IND

Entertainment

Plot 3: Plot showing the number of investments in the **top 3** sectors of the **top 3** countries on one chart (investment type: **Venture**).





Conclusions

- Considering that Spark Funds wants to invest between 5 to 15 million USD per investment round, **Venture** is the most suited funding type.
- The USA, The Great Britain and India are the most heavily funded English-speaking countries with investment type as Venture.
- The top two (Venture) sectors in the respective countries are:

#	USA	GBR	IND
Top Sector	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising
Second best Sector	Cleantech / Semiconductors	Cleantech / Semiconductors	News, Search and Messaging