

INVESTMENT ASSIGNMENT SUBMISSION

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Abstract

Spark Funds wants to make investments in a few companies. The CEO of Spark Funds wants to understand the global trends in investments so that she can take the investment decisions effectively and make investments in suitable companies.

The objective 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’.

Business Understanding:

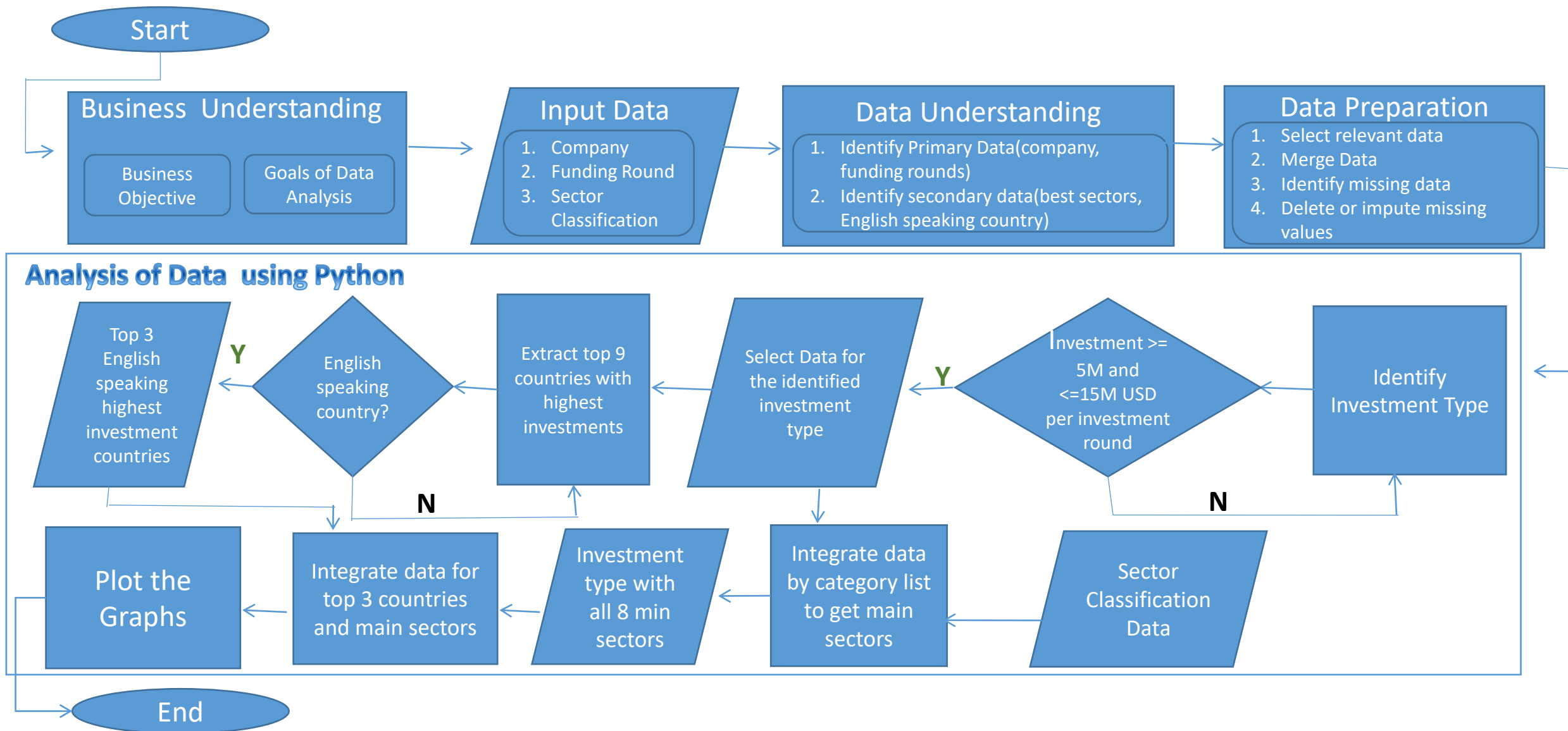
Spark Funds has two minor constraints for investments:

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

Data Understanding:

- **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 countries which have been the most heavily invested in the past. Total 66,368 companies with Unique company Id, Company Name, Category name(s), Country etc are in scope for analysis.
- **Sector analysis:** Understanding the distribution of investments across the eight main sectors.
- **Funding round details:** Details of Unique ID of company, Unique ID of funding round, Type of funding are to be analyzed. Total observations are 1,14,949

Problem solving methodology



Funding Type Analysis

- Spark Funds wants to invest between 5 to 15 million USD per round of investment
- We have chosen median over mean while calculating most representative values for the 4 funding types (investment type) i.e. venture, seed, angel & private equity.
- Representative funding amount of private equity type is 20 M USD which is more than 15 M USD while representative funding amount of seed and angel are 300000.0 USD and 414906.0 USD respectively which are less than 5 M USD.
- Venture funding type looks most suitable as its representative funding amount is 5 M USD which is in between 5M and 15 M USD.

Funding_Round_Type	Median_Value_of_raised_amount_usd
angel	414906
private_equity	20000000
seed	300000
venture	5000000

Country Analysis

- Spark Funds wants to invest in countries with the highest amount of funding for the chosen investment type i.e. Venture. Also Sparks Funds wants invest in English speaking countries.
- Based on the analysis, top nine countries which have received the highest total funding in funding type venture are : USA, CHN, GBR, IND, CAN, FRA, ISR, DEU, JPN.
- But top 3 English speaking countries are USA, GBR, IND. Hence, Spark Funds should invest in these countries.

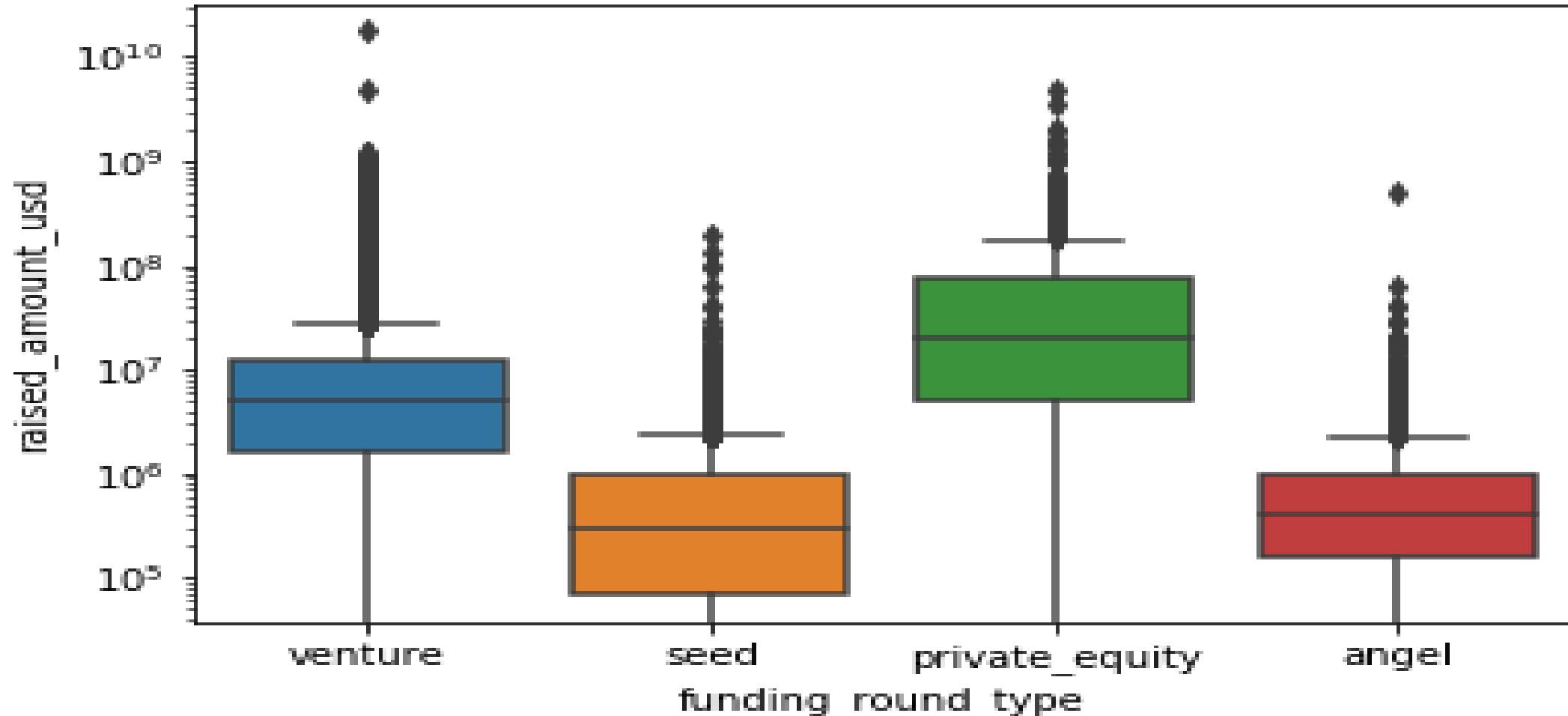
SL.NO.	Country_Code	Raised_Amount_USD
0	USA	4.20068E+11
1	CHN	39338918773
2	GBR	20072813004
3	IND	14261508718
4	CAN	9482217668
5	FRA	7226851352
6	ISR	6854350477
7	DEU	6306921981
8	JPN	3167647127

Sector Analysis

➤ The aim is to find out the most heavily invested main sectors in each of the three English speaking countries (for funding type venture and investments range of 5-15 M USD)

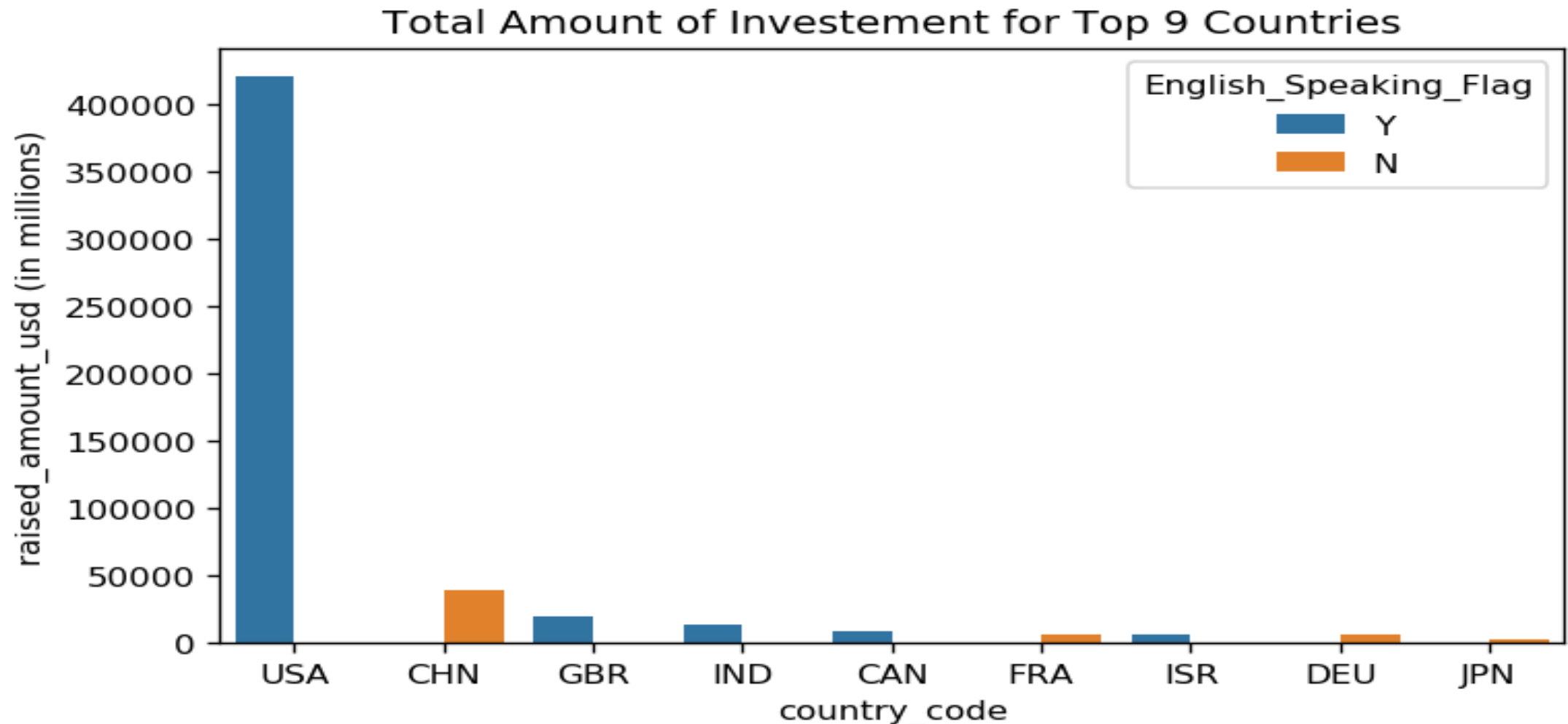
Sector Analysis for USA			Sector Analysis for GBR		
Main_Sector	Number_of_Investments	Total_Amount_of_Investments	Main_Sector	Number_of_Investments	Total_Amount_of_Investments
Automotive&Sports	167	1454104361	Automotive&Sports	16	167051565
Cleantech/Semiconductors	2350	21633430822	Cleantech/Semiconductors	130	1163990056
Entertainment	591	5099197982	Entertainment	56	482784687
Health	909	8211859357	Health	24	214537510
Manufacturing	799	7258553378	Manufacturing	42	361940335
News,Search and Messaging	1583	13971567428	News,Search and Messaging	73	615746235
Others	2950	26321007002	Others	147	1283624289
Social,Finance,Analytics,Advertising	2714	23807376964	Social,Finance,Analytics,Advertising	133	1089404014
Sector Analysis for IND					
Main_Sector	Number_of_Investments	Total_Amount_of_Investments			
Automotive&Sports	13	136900000			
Cleantech/Semiconductors	20	165380000			
Entertainment	33	280830000			
Health	19	167740000			
Manufacturing	21	200900000			
News,Search and Messaging	52	433834545			
Others	110	1013409507			
Social,Finance,Analytics,Advertising	60	550549550			

Venture funding type looks most suitable as its representative funding amount is 5 M USD which is in between 5M and 15 M USD.

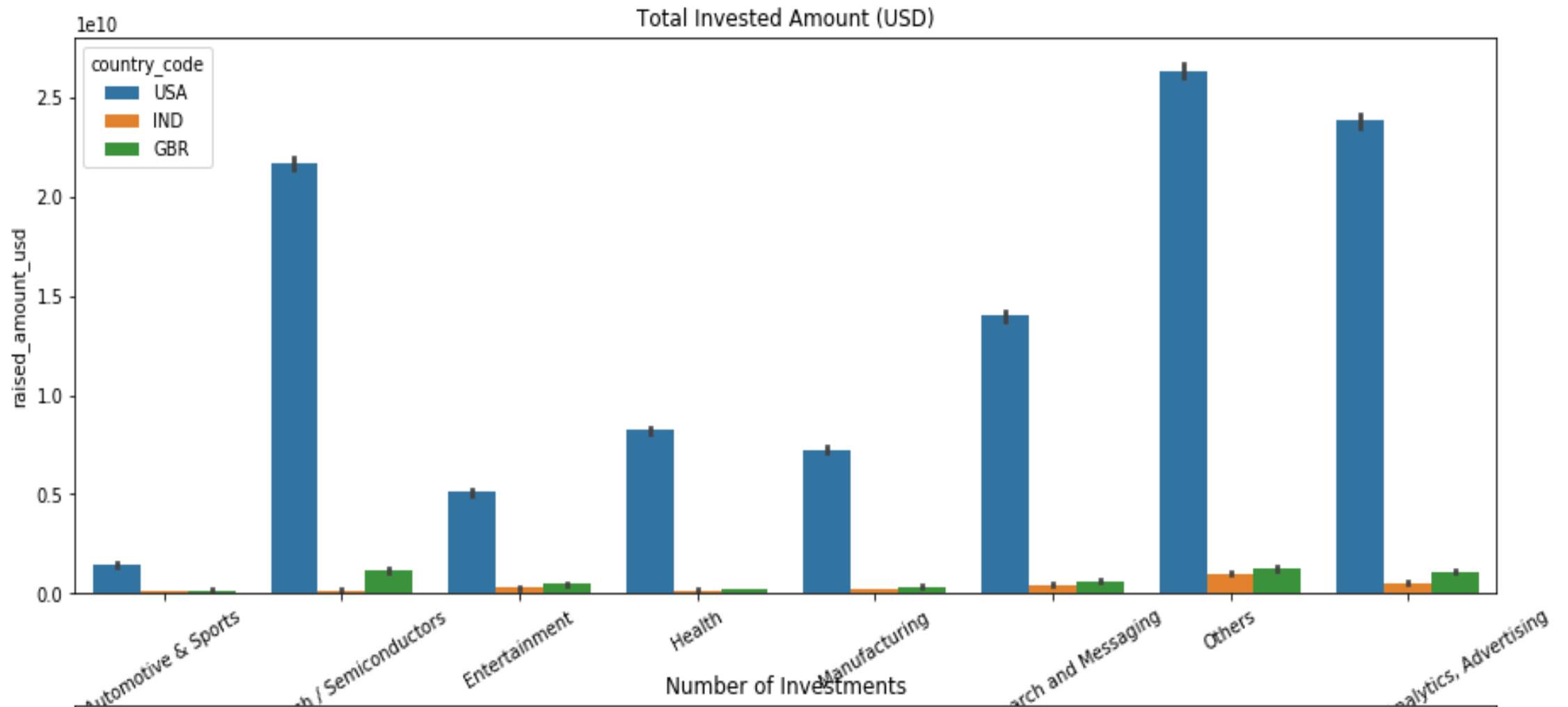


Based on the analysis, top nine countries which have received the highest total funding in funding type venture are : USA, CHN, GBR, IND, CAN, FRA, ISR, DEU, JPN.

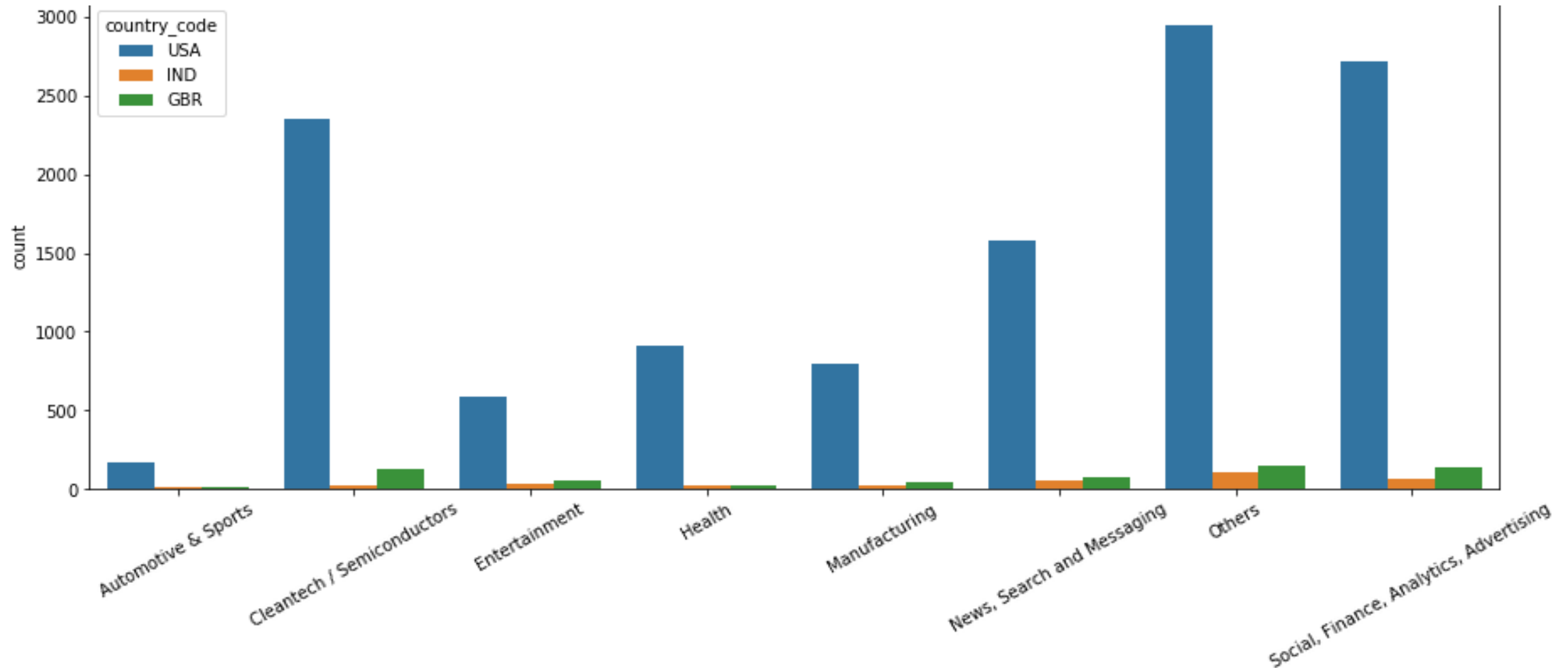
But top 3 English speaking countries are USA, GBR, IND. Hence, Spark Funds should invest in these countries.



USA got comparatively more total of investments in the OTHER sector



USA got comparatively more total number of investments in the OTHER sector



Conclusions

Below can be the investment strategy for Spark Funds considering all the objectives, constraints and strategy:

- Spark Funds should consider investing in funding type **venture** in **Others** main sector in **USA**. Reason being most investments are happening based on these parameters and it's suitable for Spark Funds.
- If Spark Funds wants to invest in different countries to reduce the risk due to country specific economy fluctuations then it should invest in **USA, United Kingdom(GBR) and India** respectively in funding type **venture** and main sector **Others**
- If Spark Funds wants to further reduce risk by investing in different sectors also along with different countries then please refer Slide 9 and Slide 10 which contain detail information in bar plots for top 3 country wise and top 3 sectors wise total number of investments and total amount of investments.