

INVESTMENT ASSIGNMENT

SUBMISSION

Name: Ashwin Prabhu

ABSTRACT

PROBLEM STATEMENT:

Spark Funds being an **asset management company** wants to understand the global trends in investment and **invest in some companies**

BUSINESS CONSTRAINT:

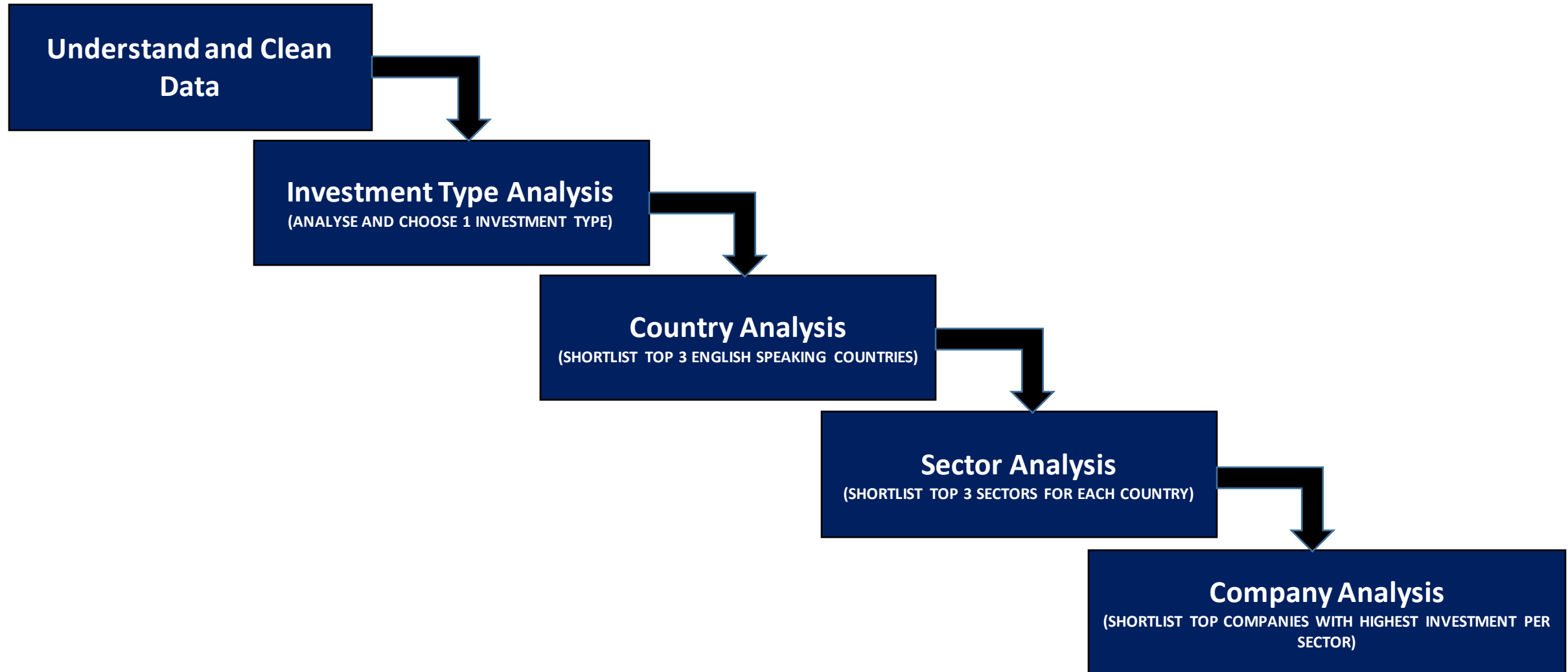
- Invest between **5 to 15 million USD** per round of investment
- Invest only in **English-speaking countries**

STRATEGY:

Invest where most of the **other investors** are investing

DATA ANALYSIS GOALS FOR MAKING THE RIGHT RECOMMENDATION:

- **Investment type analysis**
- **Country analysis**
- **Sector analysis**



Important DataFrames	Shape	Unique_ID	Count(Unique_ID)
companies	(66368, 10)	permalink	66368
rounds2	(114949, 6)	funding_round_permalink	114949
master_frame(Original)	(114949, 15)	funding_round_permalink	114949
master_frame(Post Cleanup)	(88529, 9)	funding_round_permalink	88529
mapping(Post Cleanup)	(687, 10)	category_list	687

INVESTMENT TYPE ANALYSIS

fund_type	Frequency	fund_type	Inv Amount Median	fund_type	Inv Amount Mean
venture	47534	venture	5000000	venture	9705920.18
seed	21093	seed	300000	seed	732219.59
angel	4399	angel	414906	angel	859380.12
private_equity	1584	private_equity	20000000	private_equity	30449598.60

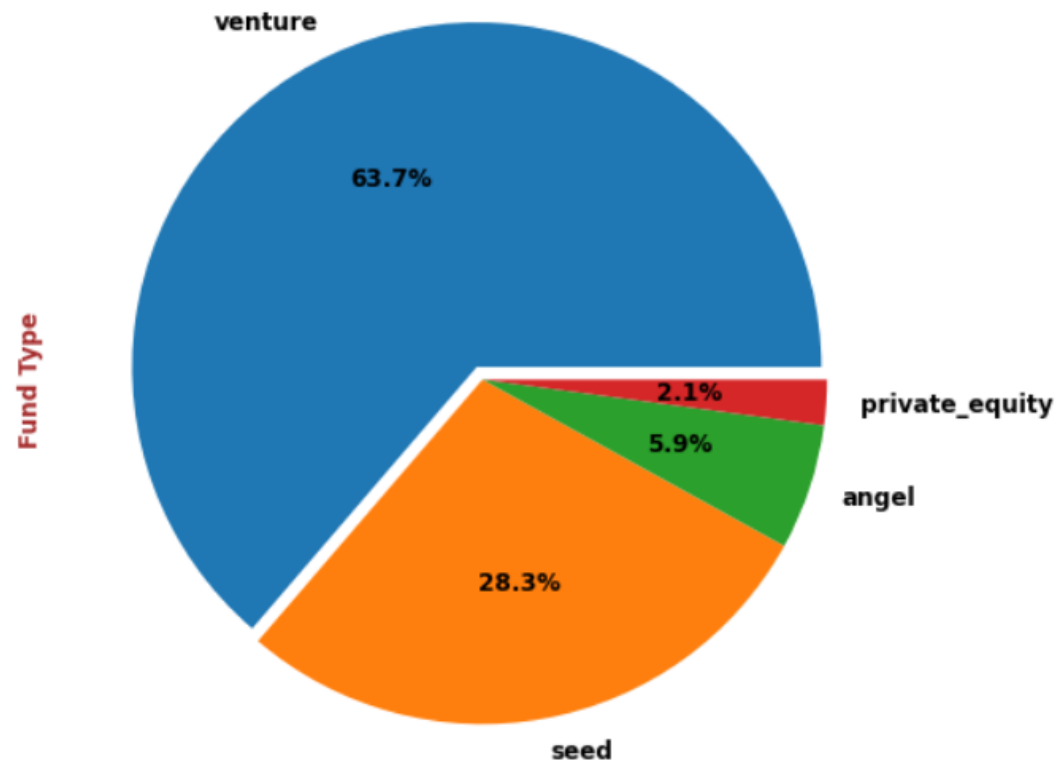
fund_type	Inv Amount 25th Percentile	fund_type	Inv Amount 75th Percentile
venture	1600000	venture	12000000
seed	68794	seed	1000000
angel	152671	angel	1000000
private_equity	4499995.25	private_equity	50000000

1. **Private Equity** - Huge investors - Huge Funds for Investment - Number of such investors are less.
2. **Venture** - Moderate investors - Moderate Funds - Number of such investors is the highest
3. **Angel and Seed** - Small investors - Small Funds - Number of such investors between Venture and Private Equity

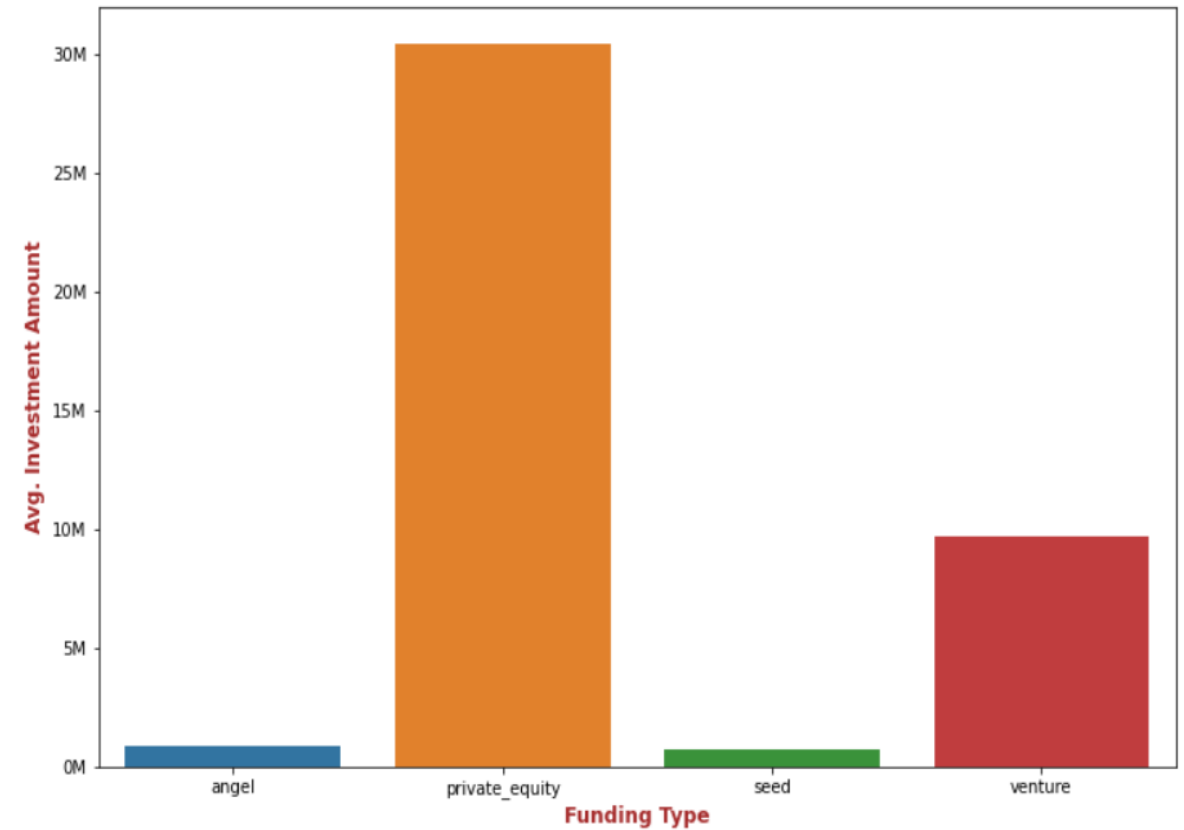
Conclusion : Since we have to invest 5-15 M, clearly '**Venture**' is our desired Fund Type.

PLOT 1: INVESTMENT TYPE ANALYSIS

Frequency Of Data Across Various Funding Types



Representative Amount Of Investment In Each Funding Type



Top 9 Countries for 'Venture'

country_code	Inv Amount Sum (M)
USA	348203.89
CHN	25142.92
GBR	18017.21
IND	10235.81
CAN	9317.22
ISR	6704.35
FRA	6370.33
DEU	6136.74
CHE	2801.56

Analysis:

Top 3 countries as per investment sum for 'Venture' fund type are:

1. USA – 350 Billion USD
2. China – 25 Billion USD
3. United Kingdom – 18 Billion USD

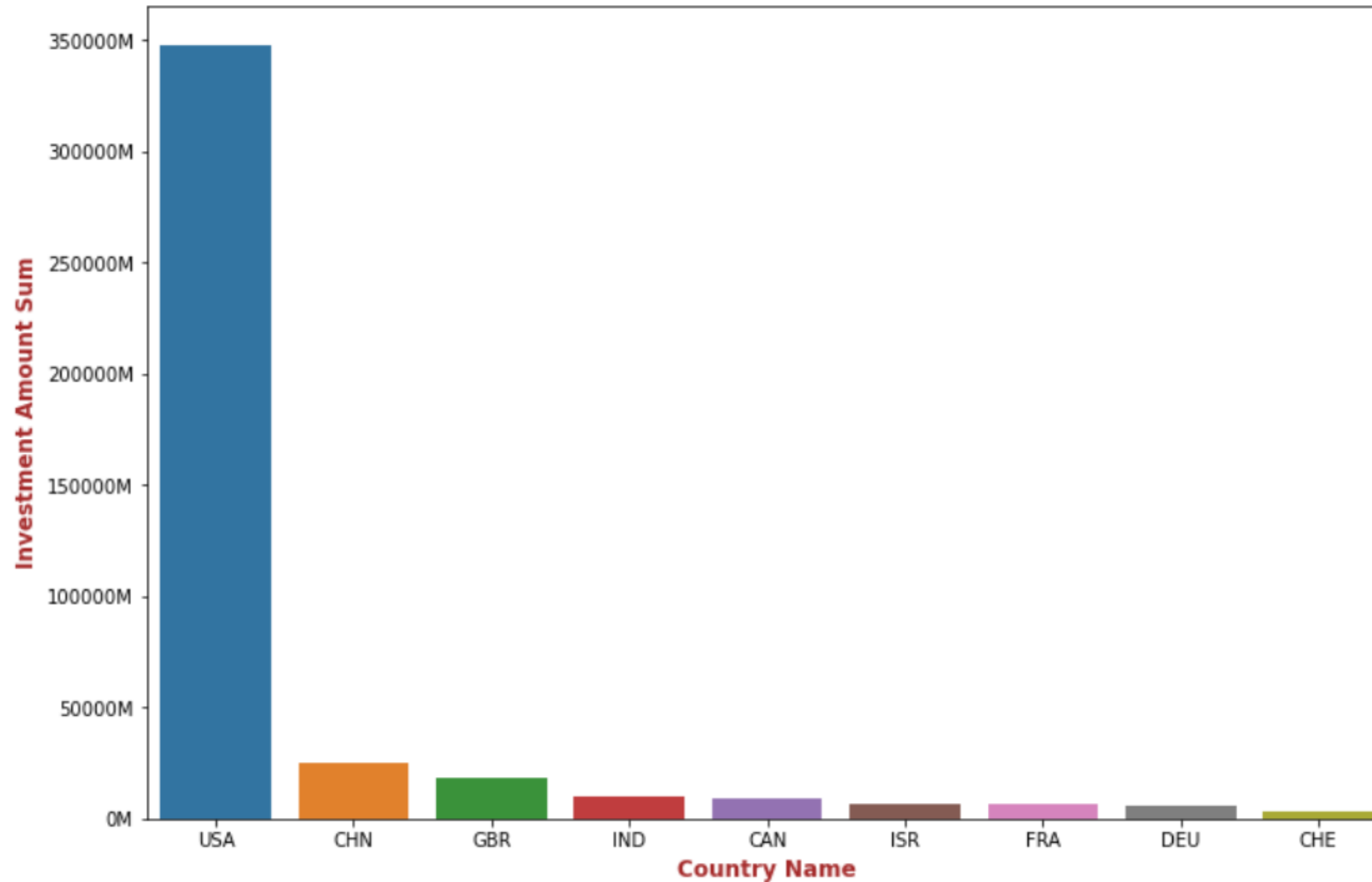
Business Constraint: Official Language – English
Hence China cannot be listed in the top 3 countries.

Final Shortlisted 3 Countries:

1. USA – 350 Billion USD
2. United Kingdom – 18 Billion USD
3. India – 10 Billion USD

PLOT 2: COUNTRY ANALYSIS

Top 9 Countries With Highest Sum Of Investment Amount Across All Sectors



SECTOR TYPE ANALYSIS

Top 3 sectors identified in each of the top 3 countries for fund type 'Venture' with investment between 5M and 15M

USA

GBR

IND

main_sector	No_Of_Investments	main_sector	No_Of_Investments	main_sector	No_Of_Investments
Others	2950	Others	147	Others	110
Social, Finance, Analytics, Advertising	2714	Social, Finance, Analytics, Advertising	133	Social, Finance, Analytics, Advertising	60
Cleantech / Semiconductors	2350	Cleantech / Semiconductors	130	News, Search and Messaging	52

USA

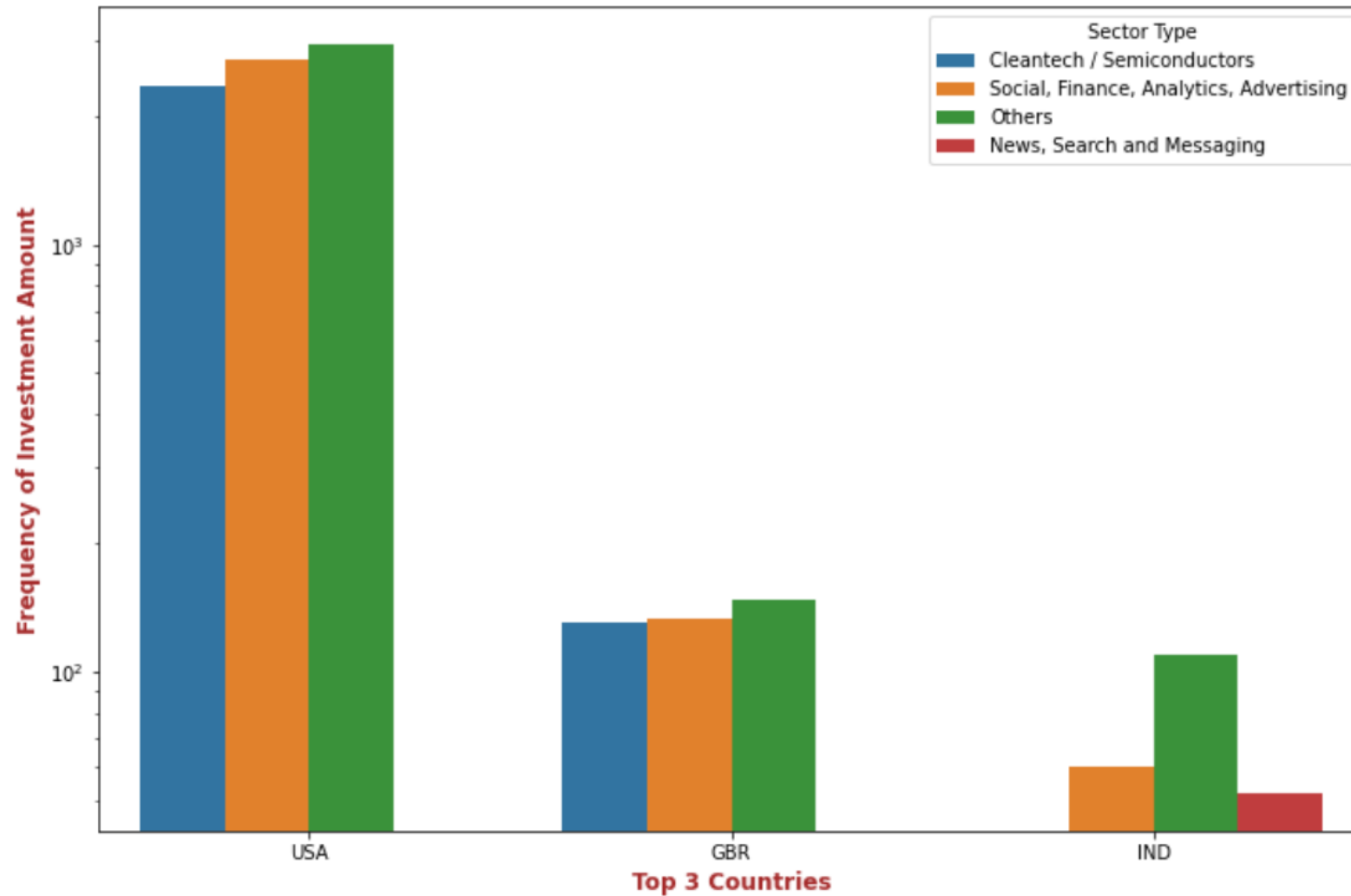
GBR

IND

main_sector	Invest_Amt_Sum (K)	main_sector	Invest_Amt_Sum (K)	main_sector	Invest_Amt_Sum (K)
Others	26321007.00	Others	1283624.29	Others	1013409.51
Social, Finance, Analytics, Advertising	23807376.96	Social, Finance, Analytics, Advertising	1163990.06	Social, Finance, Analytics, Advertising	550549.55
News, Search and Messaging	21633430.82	News, Search and Messaging	1089404.01	News, Search and Messaging	433834.54

PLOT 3: SECTOR ANALYSIS

Number Of Investments in Top 3 Sectors of the Top 3 Countries for 'Venture' Fund Type



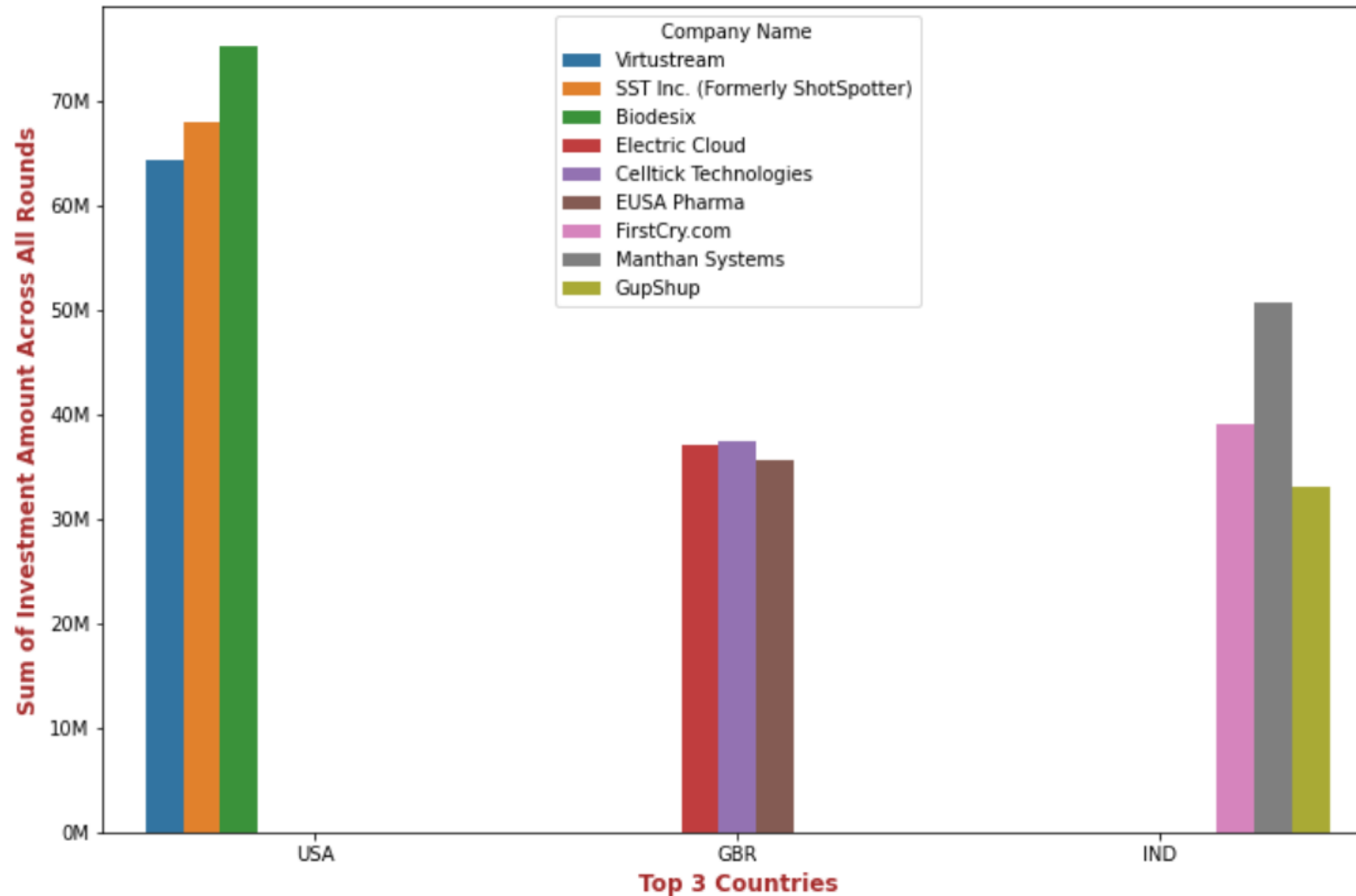
COMPANY ANALYSIS

			Investment_Sum_In_All_Rounds
country_code	main_sector	Company_Name	
USA	Cleantech / Semiconductors	Biodesix	75300000.0
	Social, Finance, Analytics, Advertising	SST Inc. (Formerly ShotSpotter)	67933006.0
	Others	Virtustream	64300000.0
IND	Social, Finance, Analytics, Advertising	Manthan Systems	50700000.0
	Others	FirstCry.com	39000000.0
	News, Search and Messaging	GupShup	33000000.0
GBR	Social, Finance, Analytics, Advertising	Celltick Technologies	37500000.0
	Others	Electric Cloud	37000000.0
	Cleantech / Semiconductors	EUSA Pharma	35600000.0

Based of the highest investment (calculated by sum of investment per sector across all rounds) on companies between 5 and 15 million, for each sector, country and fund type selected, we have identified the above mentioned companies that Spark Funds can invest in.

PLOT 4: COMPANY ANALYSIS

Final Recommendation Of 'Venture' Fund Type Companies Across Top 3 Sectors Per Country



FINAL RECOMMENDATION

Fund Type	Venture								
Investment	5-15 Million								
Country	USA			IND			GBR		
Sector/Cate gory	Cleantech / Semicond uctors	Social, Finance, Analytics, Advertising	Others	Social, Finance, Analytics, Advertising	Others	News, Search and Messaging	Social, Finance, Analytics, Advertising	Others	Cleantech / Semicond uctors
Company	Biodesix	SST Inc. (Formerly ShotSpotter)	Virtustr eam	Manthan Systems	FirstCry. com	GupShup	Celltick Technologies	Electric Cloud	EUSA Pharma