

INVESTMENT CASE STUDY

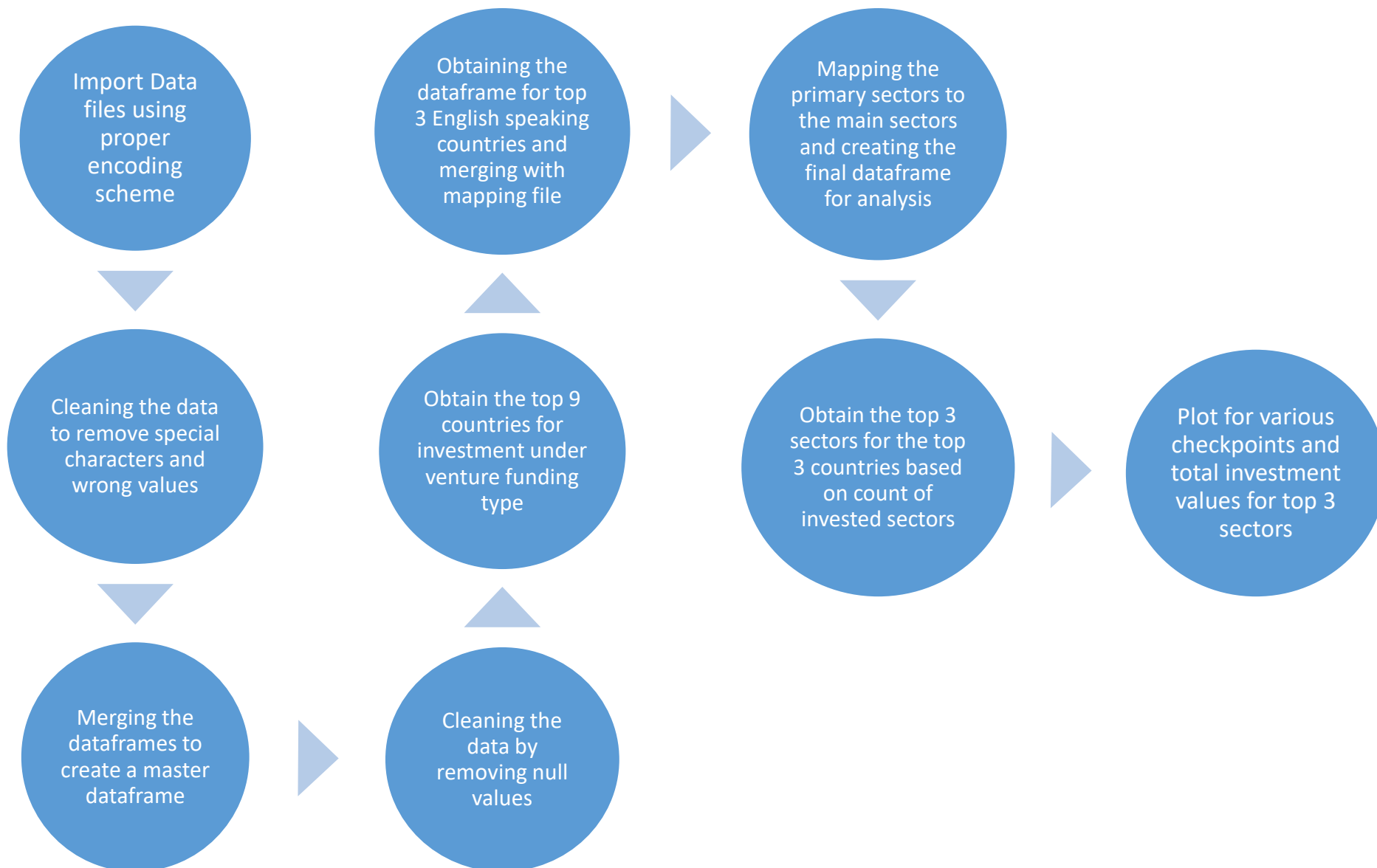
SUBMISSION

Submitted by,

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Objectives

- To support Spark Funds to understand the Global trends in investments between 5 to 15 Million
- To identify the best sectors, countries, and the most suitable investment type.
- To identify the total investments in top English Speaking countries.
- Identify best investment type like venture, seed, private equity, angel etc. suitable for investment.
- Provide information about the best sectors having high investment potential under top 3 countries



Funding type Analysis

- Master dataframe is obtained after cleaning and merging the two dataframes of companies and rounds
- The master frame is cleaned to remove the null values and this is analysed for the funding types – venture, angel, private equity and seed
- Median is found to be the most representative value of the investment amount
- Using the median values it is found that ‘Venture’ is the most suitable funding round type for Sparks fund investment

```
In [332]: funding_df.groupby('funding_round_type')['raised_amount_usd'].mean().sort_values(ascending=False)
```

```
Out[332]: funding_round_type
private_equity    7.087214e+07
venture          1.174202e+07
angel            9.728313e+05
seed             7.446514e+05
Name: raised_amount_usd, dtype: float64
```

```
In [333]: funding_df.groupby('funding_round_type')['raised_amount_usd'].median().sort_values(ascending=False)
```

```
Out[333]: funding_round_type
private_equity    20000000.0
venture          5000000.0
angel            418146.0
seed             300000.0
Name: raised_amount_usd, dtype: float64
```

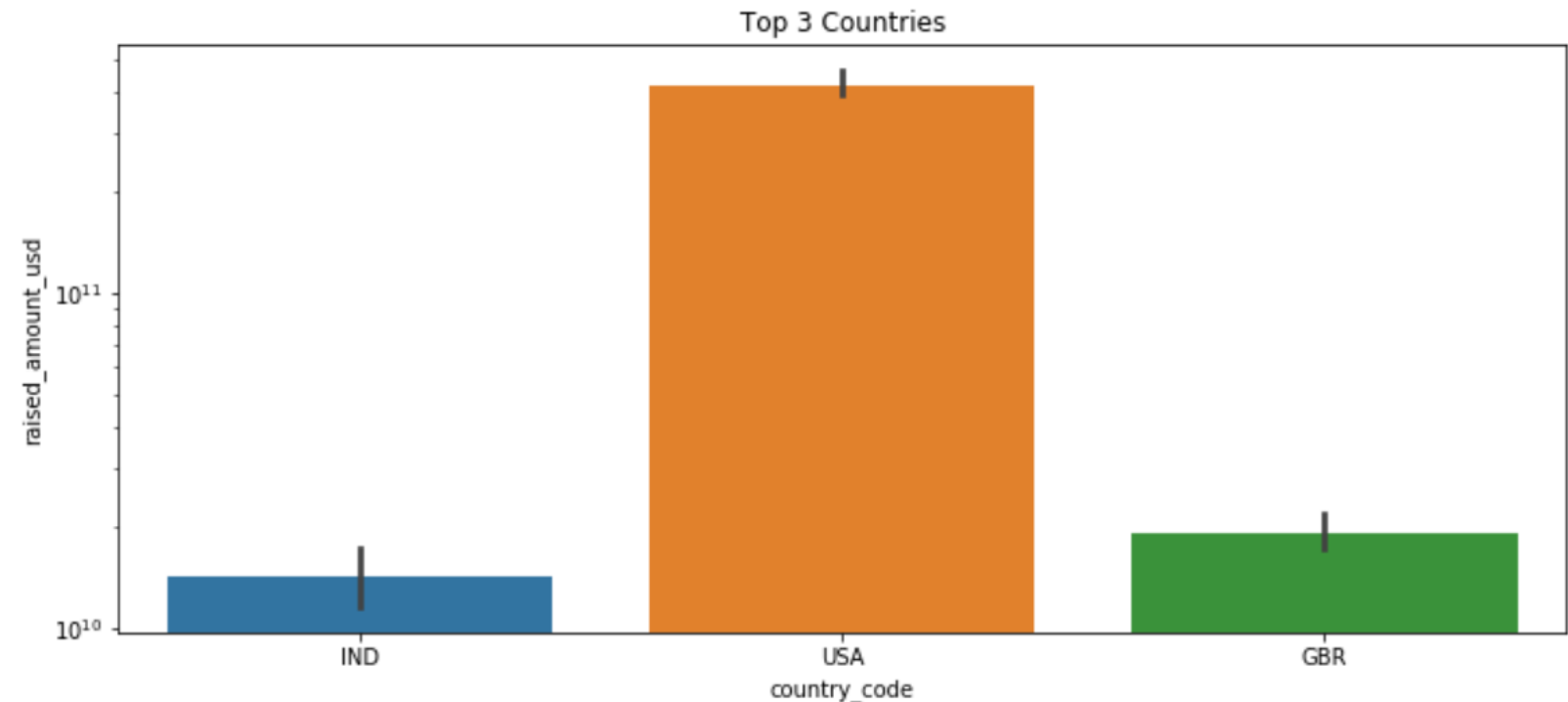
Mean and median has a lot of difference in the values. Also mean has a lot of high values or outliers causing the mean to be very high (above the spark investment range).

So median is considered and the most relevant funding type is "venture" as the value is 5million and lies in the range of spark investment

Country Analysis

- The dataframe is grouped based on country codes and the sum of total investment is obtained
- This gives us the top 9 countries which have received the highest total investment
- Based on the given data the top 3 English speaking countries are found to be USA, GBR and IND
- These are the most suited investment friendly countries for Sparks investment

country_code	sum
USA	4.194432e+11
CHN	3.695087e+10
GBR	1.923553e+10
IND	1.416781e+10
CAN	9.435487e+09
FRA	6.825021e+09
ISR	6.551761e+09
DEU	6.180782e+09
JPN	3.018150e+09



Sector Analysis

- The dataframe containing the top 3 countries and the mappings file are merged to provide the sector dataframe
- The primary sectors are extracted and are mapped to one of the 8 main sectors
- They are then filtered as per the Spark fund requirement for investment between 5-15 million USD
- Individual dataframes for the top 3 countries are filtered out
- The top 3 sectors for each country is then obtained. The top 3 sectors are - 'Others', 'Social, Finance, Analytics, Advertising' and 'Cleantech / Semiconductors'

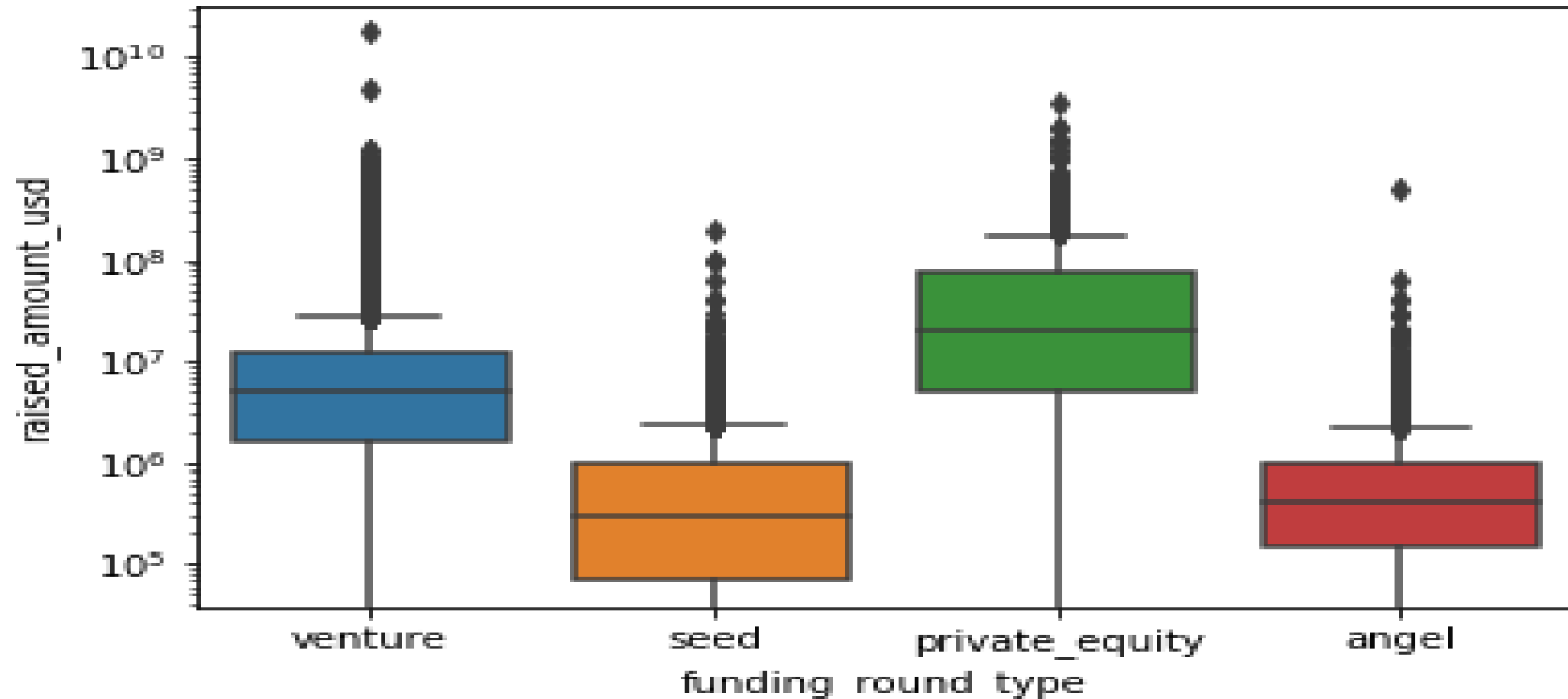
country_code	main_sector	count	sum
USA	Others	2949	2.630901e+10
	Social, Finance, Analytics, Advertising	2711	2.378738e+10
	Cleantech / Semiconductors	2348	2.161478e+10
	News, Search and Messaging	1581	1.395234e+10
	Health	909	8.211859e+09
	Manufacturing	798	7.249553e+09
	Entertainment	591	5.099198e+09
	Automotive & Sports	167	1.454104e+09

country_code	main_sector	count	sum
GBR	Others	145	1.273239e+09
	Social, Finance, Analytics, Advertising	130	1.068995e+09
	Cleantech / Semiconductors	120	1.079398e+09
	News, Search and Messaging	70	5.981207e+08
	Entertainment	55	4.767237e+08
	Manufacturing	38	3.305364e+08
	Health	20	1.867220e+08
	Automotive & Sports	14	1.470452e+08

country_code	main_sector	count	sum
IND	Others	110	1.013410e+09
	Social, Finance, Analytics, Advertising	60	5.505496e+08
	News, Search and Messaging	52	4.338345e+08
	Entertainment	33	2.808300e+08
	Manufacturing	21	2.009000e+08
	Cleantech / Semiconductors	20	1.653800e+08
	Health	19	1.677400e+08
	Automotive & Sports	12	1.219000e+08

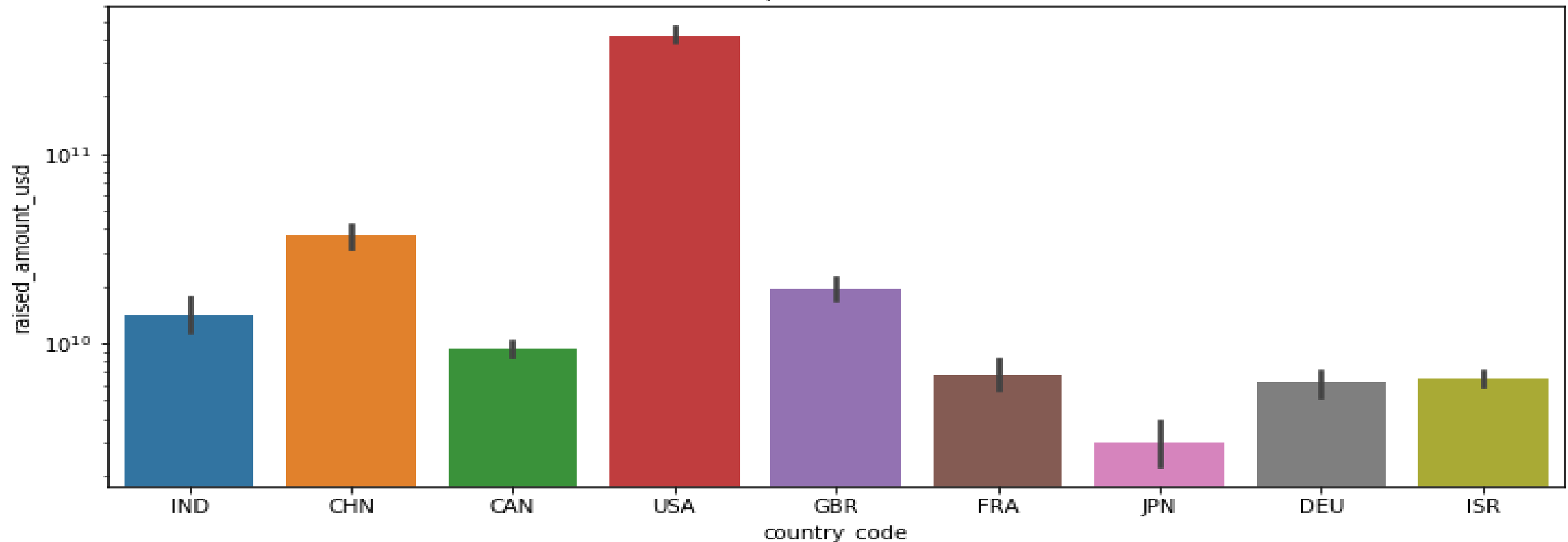
Results

Plot showing the Funding round type vs Raised amount(USD) for the 4 main funding types

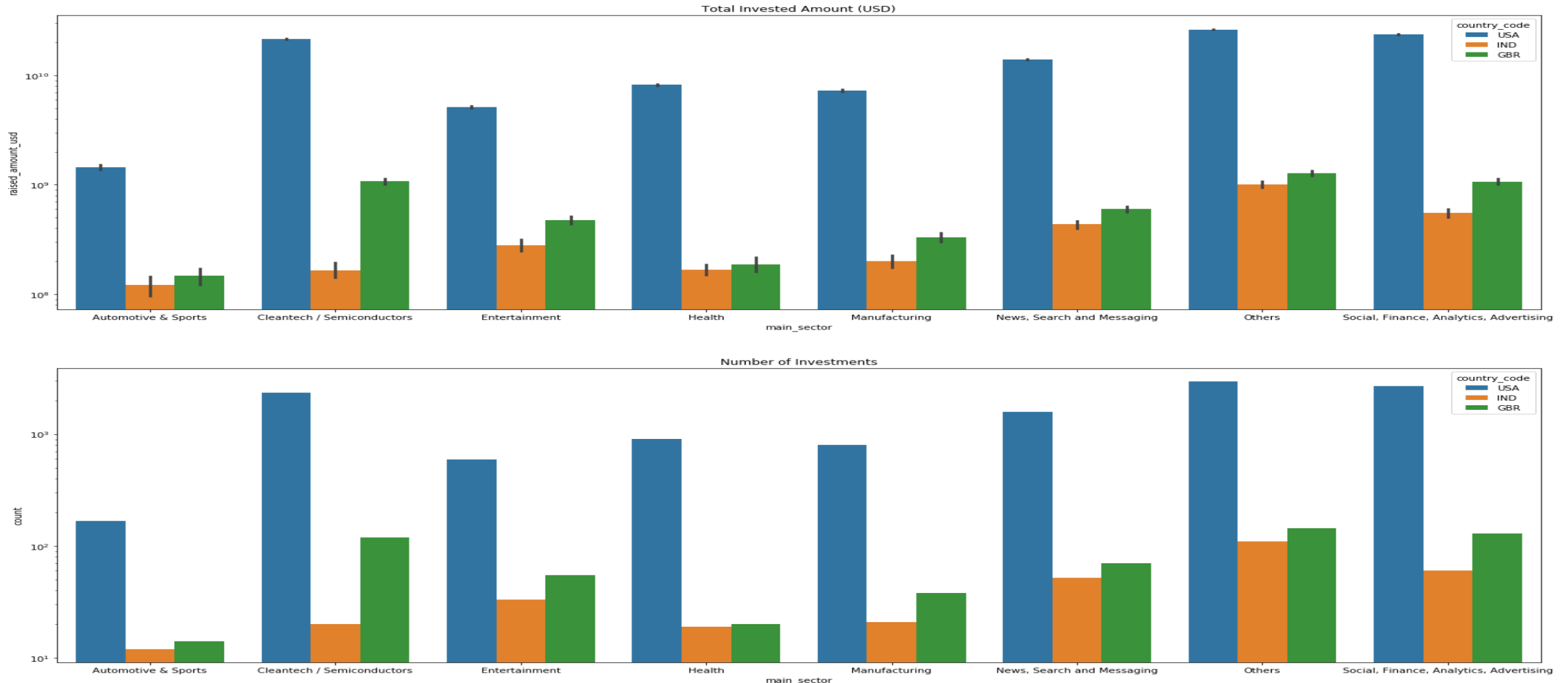


- Plot showing the country code vs raised amount(USD) for the top 9 countries.
- It can be clearly seen that the top 3 countries are USA, China and Great Britain.
- However China doesn't have English as its official language. So the top 3 English speaking countries are USA, GBR and India

Top 9 Countries



Plot showing the log scaled values of Number of Investment and Total Amount Invested for the Top 3 countries in the Main Sectors



Conclusions

- The most suitable funding type for Sparks Fund for an investment between 5mn to 15mn is in ‘Venture’ funding type
- The top 3 English speaking countries for investment are USA, GBR and IND
- The top 3 sectors for investment for the 3 countries are

Country	Sectors
USA	1) Others 2) Social, Finance, Analytics, Advertising 3) Cleantech / Semiconductors
GBR	1) Others 2) Social, Finance, Analytics, Advertising 3) Cleantech / Semiconductors
IND	1) Others 2) Social, Finance, Analytics, Advertising 3) 'News, Search and Messaging