INVESTMENT ASSIGNMENT

SUBMISSION

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Spark Funds – Investment Analysis

Spark Funds, an [asset management company](). 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 it can take the investment decisions effectively.
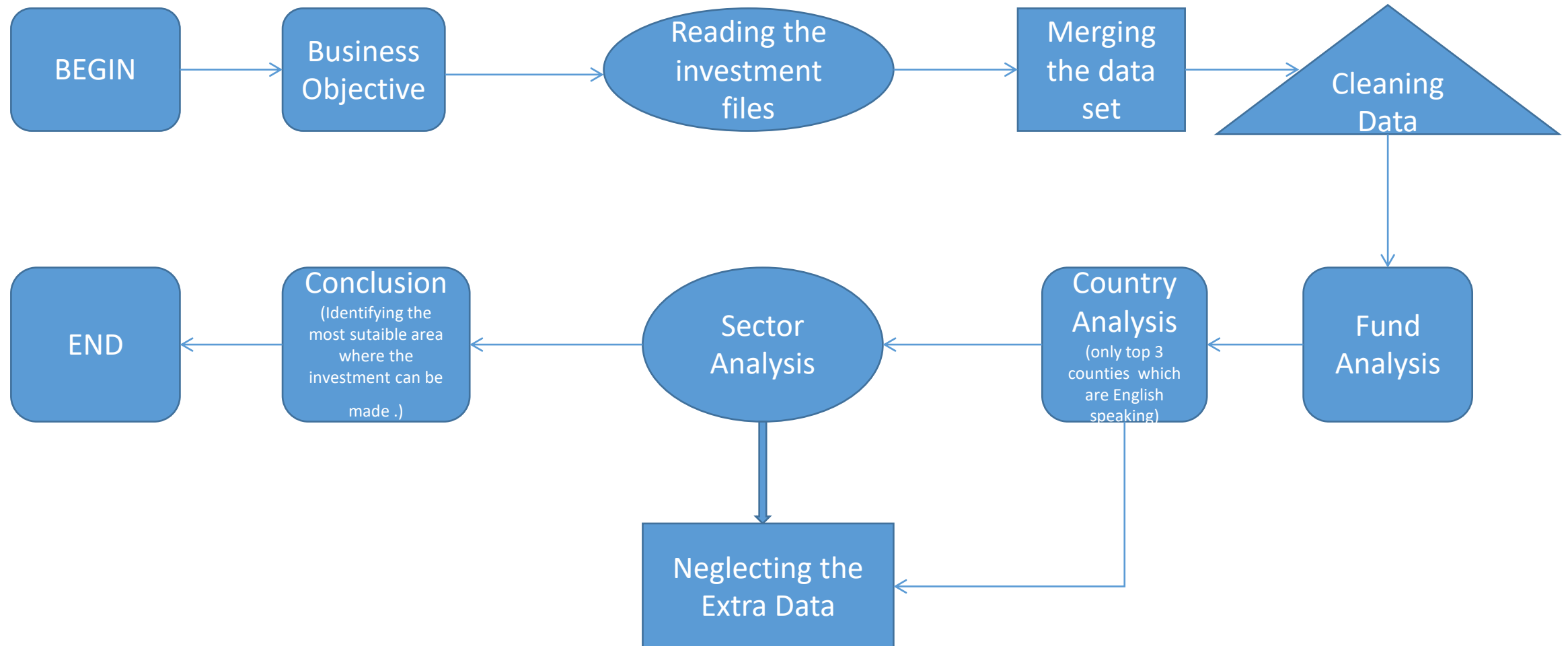
Problem Statement:

• Spark Fund wants to invest between 5 to 15 million USD per round of investment

• It wants to invest only in English-speaking countries where maximum profit can be earned .

Business objective: To identify the best sectors, countries, and a suitable investment type for making investments.

Goals of data analysis:

      • Investment type analysis to identify the most feasible investment type.

      • Country analysis where the most of the investments are there .

      •Sector analysis to identify the best sector where investment can be made .

Problem Solving Methodology

BEGIN → Business Objective → Reading the investment files → Merging the data set → Cleaning Data

END ← Conclusion (Identifying the most sutaible area where the investment can be made .) ← Sector Analysis ← Country Analysis (only top 3 counties which are English speaking) ← Fund Analysis

Sector Analysis → Neglecting the Extra Data ← Country Analysis

Funding Type Analysis

- The different funding type is compared to the value they have raised in total.

- The funding types such as seed, venture, angel, has the different amount of funding . For example, seed, angel and venture are three common stages of startup funding and venture and private equity are further large stages .

- Here we see that Venture Funding type is the best type to invest in. Specifically the mean amount of venture funds is between 5-15 millions as required by Spark Funds. All values are in millions .

```
funding_round_type
private_equity      73.938486
venture             11.724223
angel                0.971574
seed                 0.747794
Name: raised_amount_usd, dtype: float64
```

Country Based Analysis

- The country based analysis is done only for the Venture funds as we need only this as the range is 5-15 million .

- The details of the official language is English of the countries are scraped from the Wikipedia. Then we extract the top 3 countries where English is an official language .

- **USA, China (CHN), United Kingdom (GBR) and India (IND) are the topmost countries**. But China being the non-English speaking country is excluded further analysis.

```
country_code
USA     508474.0
CHN      61001.0
GBR      26900.0
IND      21049.0
CAN      13169.0
DEU       8580.0
ISR       8102.0
FRA       8079.0
NLD       5058.0
RUS       4951.0
JPN       4469.0
SGP       4002.0
BRA       3884.0
CHE       3500.0
SWE       3408.0
Name: raised_amount_usd, dtype: float64
```

```
country_code
USA     420068.029342
CHN      39338.918773
GBR      20072.813004
IND      14261.508718
CAN       9482.217668
Name: raised_amount_usd, dtype: float64
```
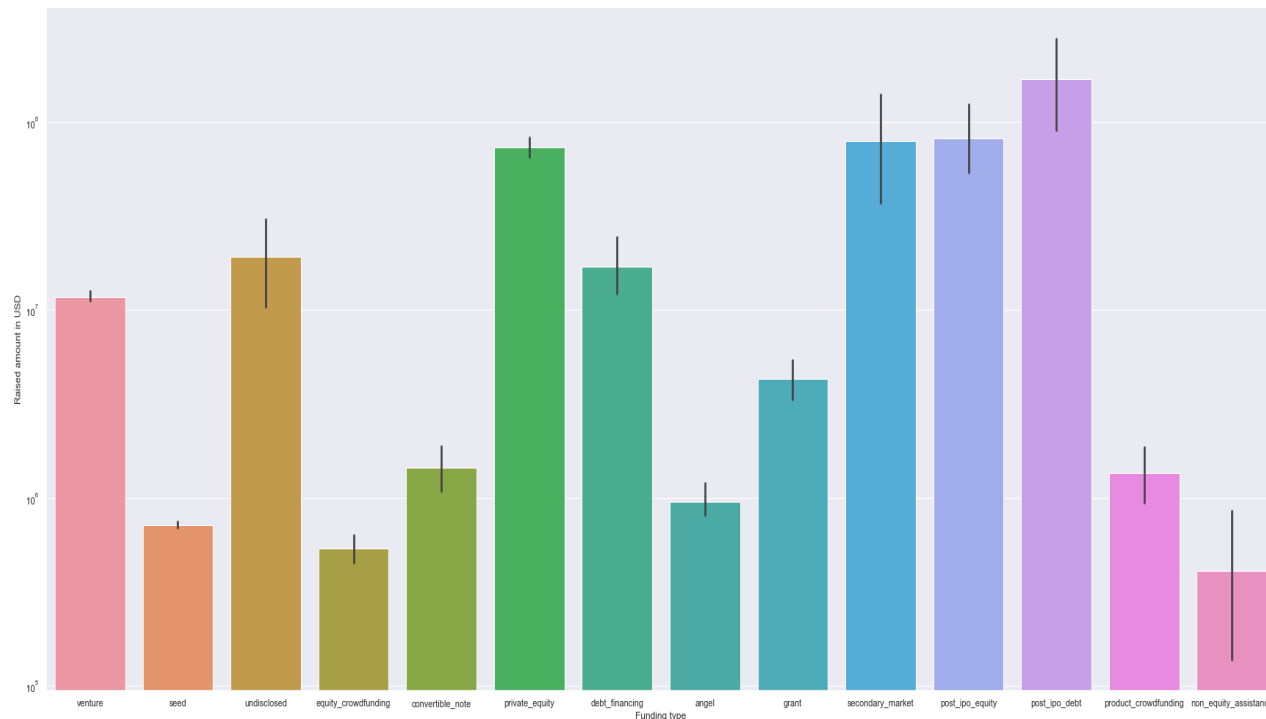
Sector Based Analysis

- There are 8 main sectors listed in mapping file. The category list of all the companies map to one of these broad sectors.

- After the analysis on countries, the input data is filtered and only the top 3 English speaking countries are retained to conduct analysis on sectors.

- The data is now grouped based on the country and the main sectors to get the best performing sectors in the top 3 English speaking countries.

- These best sectors are identified by the Number of Investments done in each sector for each country.

USA		GBR		IND	
main_sector		main_sector		main_sector	
Others	2071	Cleantech / Semiconductors	107	Others	74
Cleantech / Semiconductors	1738	Others	106	News, Search and Messaging	31
Health	601	News, Search and Messaging	31	Social, Finance, Analytics, Advertising	22
News, Search and Messaging	552	Entertainment	29	Entertainment	19
Social, Finance, Analytics, Advertising	528	Manufacturing	29	Cleantech / Semiconductors	14

Funding Type Analysis-Result

The funding For the different sectors are marked along with the required types of funding .

As the investment to be done is between 5-15 million hence the Venture Funding would be preferable option .


```
funding_round_type
private_equity    73.938486
venture           11.724223
angel              0.971574
seed               0.747794
Name: raised_amount_usd, dtype: float64
```
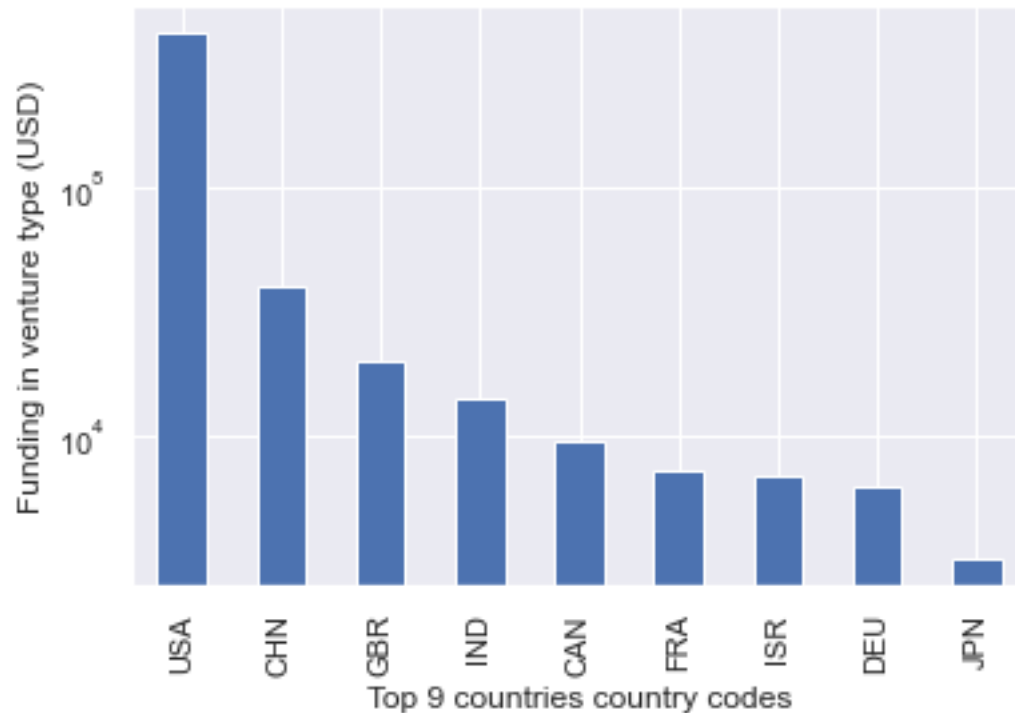
Country Based Analysis-Result

Here the Top nine countries along with the raised amount has been displayed .

As we would make investment in a **English-speaking countries** we will select the top 3 English speaking countries .

Hence , we can see USA,GBR and IND as top 3 countries where investment can be made .


```
country_code
USA         420068
CHN          39338
GBR          20072
IND          14261
CAN           9482
FRA           7226
ISR           6854
DEU           6306
JPN           3167
Name: raised_amount_usd, dtype: int64
```
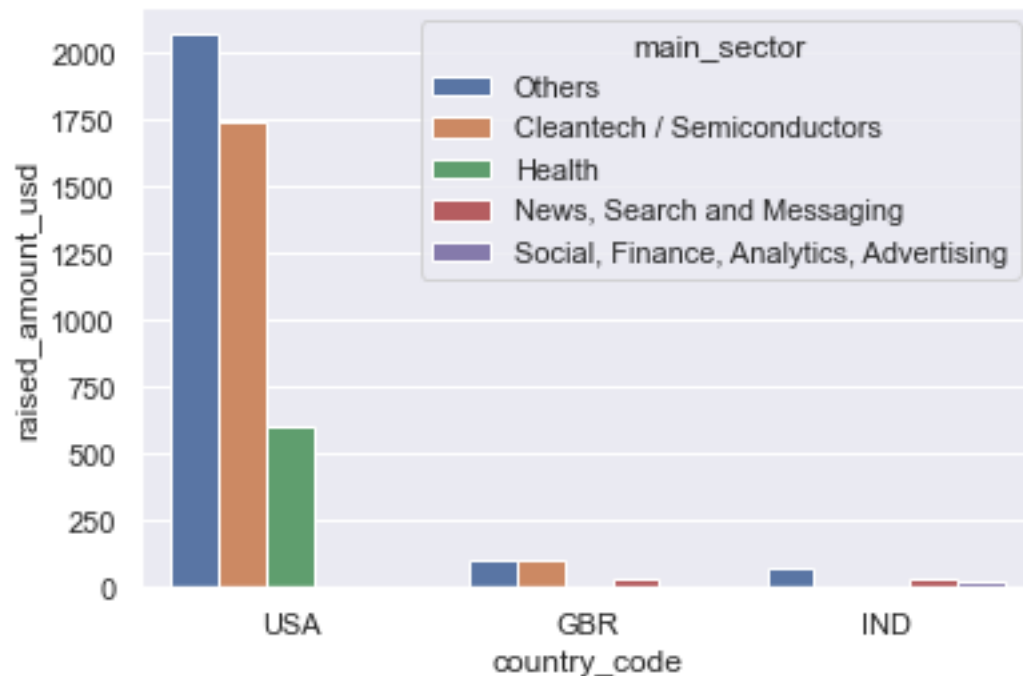
Sector Based Analysis-Result

Here we can see that the countries of USA, Great Britain and India have the top 3 sectors where investment can be made and analysis shows that we can earn maximum from investing in the above mentioned sectors .

	main_sector	raised_amount_usd	country_code
0	Others	2071	USA
1	Cleantech / Semiconductors	1738	USA
2	Health	601	USA
3	Cleantech / Semiconductors	107	GBR
4	Others	106	GBR
5	News, Search and Messaging	31	GBR
6	Others	74	IND
7	News, Search and Messaging	31	IND
8	Social, Finance, Analytics, Advertising	22	IND

Conclusions

➤ From The analysis of the data, we can conclude the following:

➤ **Venture Capital** is the best investment type with an average size in the 5-15 M USD range.

➤ **USA, Great Britain** and **India** are the top 3 English speaking countries with the highest investment amount in the Venture Funding type.

➤ The final decision by the Spark foundation to invest could be in Venture Funds in the sectors 'Others', 'Cleantech/Semiconductors' and Health within **USA,** Cleantech / Semiconductors , Others and News, Search and Messaging within **Great Britain** and Others , 'News, Search and Messaging' **and** 'Social/Finance/Analytics/Advertising' **within , India.**

THANK - YOU