



# INVESTMENT CASE STUDY

**SUBMISSION** 





### **Abstract**

#### **Problem Statement:**

Spark Funds, an asset management company, wants to make investments in a few companies and this analysis will help to understand the global trends in investments and take investment decisions effectively.

### **Objectives of the Analysis:**

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

### **Solution Approach:**

- R is used for Data preparation, from raw data sources
- Tableau is used to plot the graphs, for better understanding of analysis





# **CRISP – DM \*6 Step Model**

Phase -Business Understanding Objective a. To comprehend Business Objective b. Define Goal of Data Analysis

Findings in this stage -

#### **Business Objective:**

to identify the best sectors, countries, and a suitable investment type for making investments.

#### Goals of Data Analysis:

#### Perform:

- ✓ Investment type analysis (the top investment options between 5 & 15 M)
- ✓ Country analysis (the top 3 English speaking countries to be considered)
- ✓ Sector Analysis (the top 3 sectors)

correlation between these three to enable management to arrive at a profitable investment decision

#### Considered the following three pertinent databases:

- ❖ Companies The companies that have been invested into across the globe, across sectors
- ❖Rounds2 The investment details of these firms across the venture types such as seed, venture etc.
- ❖ Mapping details of the various categories against their Sectors

Phase - Data Understanding

- a. Gather relevant data
  - b. Check data quality c.Comprehend data and
- variable correlation

Phase - Data Preparation Objective:

- a. Select relevant data
- b. Clean data
- c. Construct and Integrate data
- Format data

- ✓ Identified the profitable funding type within 5 and 15 M limit
- ✓ Identified the top 3 English speaking countries
- ✓ Prepared a representation of the Top 3 English speaking countries on the basis of
  - ✓ total investment count
  - ✓ Sum of investment against each sector
  - √ Total investment amount and
  - ✓ The top 3 sectors
  - ✓ Top firms which

Design a Model with the current

- a. Mathematically Sound b. Efficient
- c. Easy to use

- ✓ chose the fields relevant for analysis
- ✓ looked up any anomalies in the data and
- ✓ considered the impact of missing values on the analysis.
- Eg Presence of NA s, blanks etc in funds field or a firm mapped to multiple sectors
- ✓ Post data cleanup, formed a Master database with relevant fields to get a consolidated view of the investments across various firms and sectors





## **Funding Type Analysis**

- The funding types are analysed based on below points:
  - 1. Type of the company (startup, corporate, etc.)
  - 2. Stage (early stage startup, funded startup, etc.)
  - 3. Amount of funding (a few million USD to a billion USD)
- Average Investment amounts of each Investment type, is calculated.
- Based on our Analysis, "Venture" type investment is best suitable.
- Analysis Results and Plots are mentioned in **Funding Investment Type Results** slide (Slide# 7)





## **Country Analysis**

### **Objectives for Country Analysis**

- To invest in countries with the highest amount of funding for "Venture" type.
- To see, the top nine countries which have received, the highest total funding, for all sectors in Venture Type.
- To select top 3 English-Speaking Countries, for investment.
- As per our Analysis, below are the Top 3 English speaking countries (Sequential Preference), suitable for investment for Spark Funds.
  - 1. United States of America (USA)
  - 2. Great Britain (GBR)
  - 3. India (IND)





## Sector Analysis

Sector analysis was done in following 3 phases.

#### Phase 1:

Mapping each category of investment to Main Sector

#### Phase 2:

Mapping each company to Main sector based on Category.

#### Phase 3:

Analysis of Total number of investments for top 3 countries selected above i.e. USA, GBR, IND

Analysis of Total amount of investment for top 3 countries

Analysis of Top 3 sectors in Top 3 countries

Analysis of Number of investments for top 3 sectors in top 3 countries

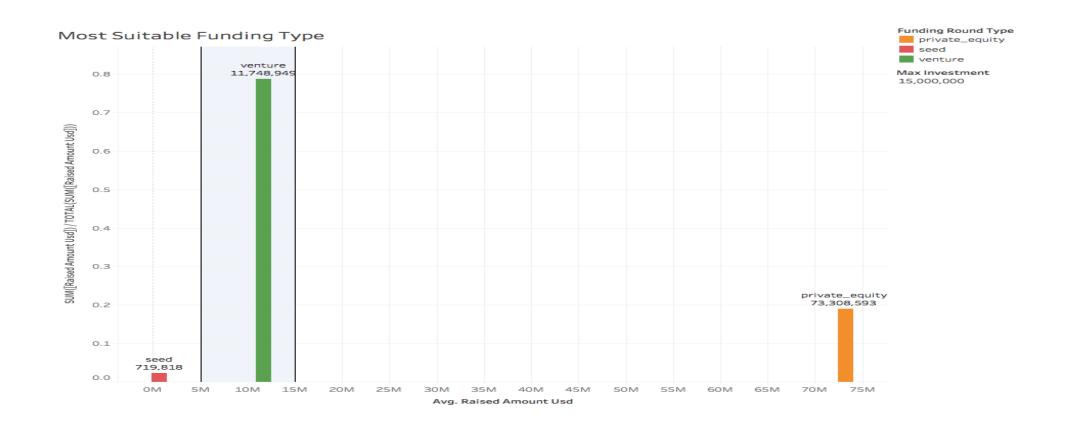
Analysis of the top companies, in top 2 sectors, for top 3 countries.





## Funding Investment type –Analysis Result

Plot showing the fraction of total investments (globally) in venture, seed, and private equity, and the average amount of investment in each funding type. It shows, Venture funding type (FT) is best suited for Spark Funds.

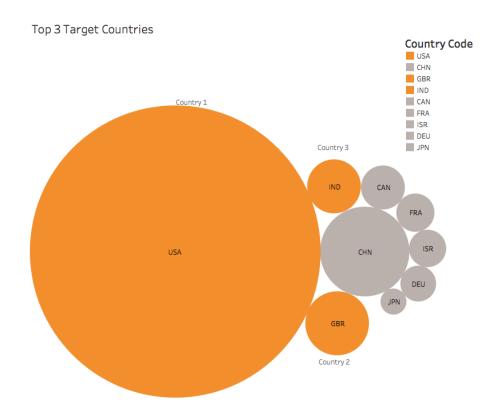






## **Country Analysis Result**

Plot showing the top 9 countries against the total amount of investments of Venture funding type. Top 3 countries (USA, GBR, IND), best suited for Spark Funds are highlighted.

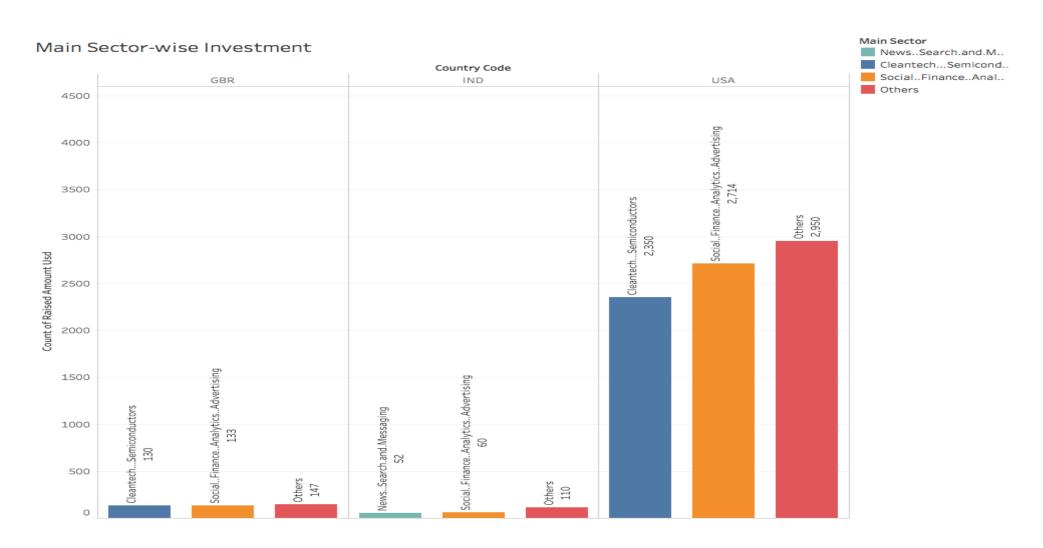






## Sector Analysis Result

Plot showing the number of investments in the top 3 sectors, of the top 3 countries.







## **Conclusions**

- Based on our analysis "Venture" type investment, in United States of America, for "Others" sector is best suited for Spark Funds.
- Additional proposition Other countries suitable for Spark funds are Great Britain and India with leading sectors "Social..Finance..Analytics..Advertising", "Cleantech...Semiconductors" and "News..Search.and.Messaging"