

INVESTMENT CASE STUDY

SUBMISSION

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Spark Funds – Investment Strategy

Spark funds, an asset management company, is looking for a strategic investment options based on global trends.

A solution needs to be drawn keeping below limitations and business objectives in mind.

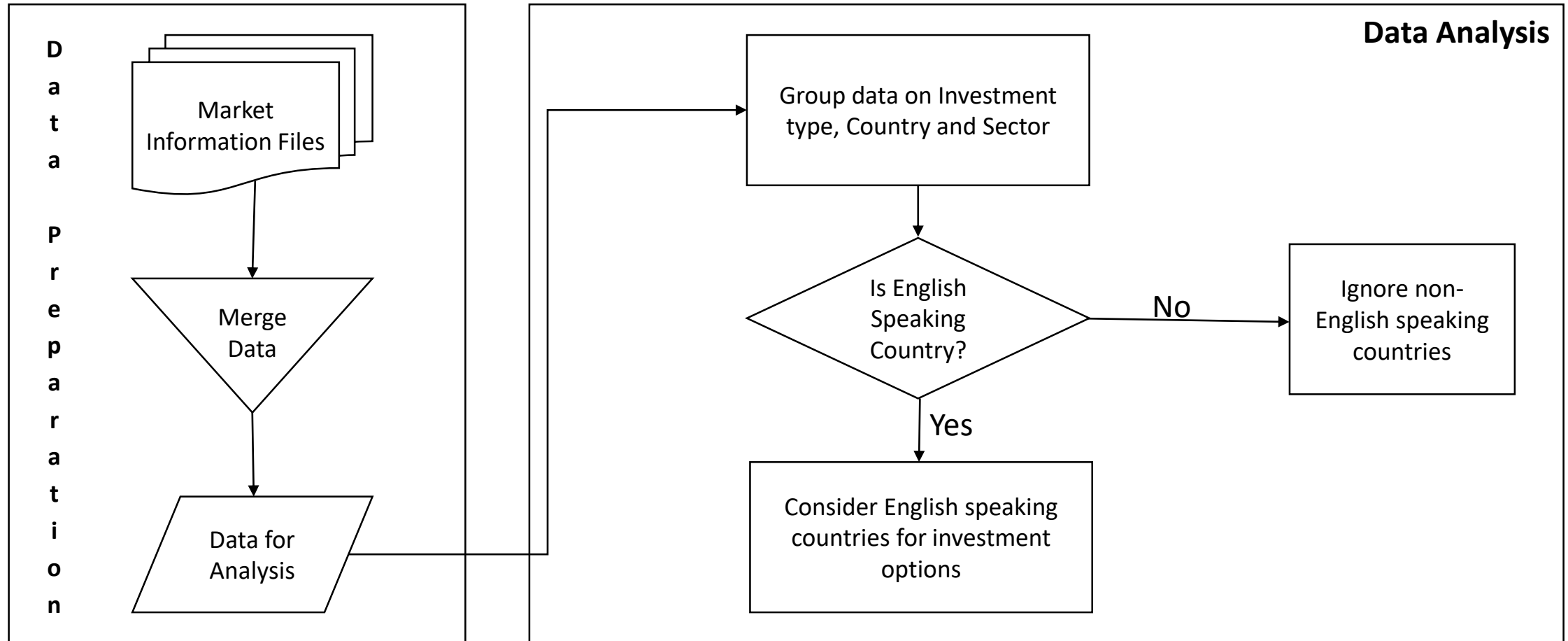
Limitations:

1. 5 to 15 million USD will be investment per round.
2. Investment will be only in English speaking countries for ease of communication.

Business Objectives:

1. Identifying best sectors, countries and investment type for making investment.
2. Extensive analysis of Investment type, sector and country needs to be done.

Strategic Investment Decision – Flow Chart



Problem Analysis

To ideate a workflow we had brainstorming session among team. This led to building up of a stream-lined workflow keeping business objectives in view and understanding data.

Understanding Data:

Companies – this dataset has information about companies and their categories

Rounds – Investment preferences of the companies. Like amount, investment type, etc.,

On high level following are stages in the workflow:

- Gather data for the analysis
- Clean the data for readability
- Collate data in to a model
- Filter model based on Investment type, Country and Sector
- Identify best possible investment options
- Plot on the option for graphical representation.
- Account for missing mappings in the mapping file.

Tools for the workflow:

- RStudio is used for data cleansing and modelling
- Tableau is used for plotting the results

Data Model Analysis

Data quality is crucial for this step. We have companies, rounds and mapping information in files. This needs to be cleansed and built into a model.

Building model RStudio is extensively used and following stages are addressed in building model:

- Data Import – Import data from files.
- Data Cleansing – Removing or correcting dirty data. Handling of NA values.
- Data Merging – Merge companies and investment round data to get fully readable dataset based on unique key.
- Data Mapping – Mapping dataset for identifying sectors and investment preferences and also define the missing mappings by mapping the primary sectors to the nearest logical main sector.
- Filtering – To identify preferred investment options for Spark Funds to invest.
- Exporting Data – For tableau plotting data is exported.

Model Objectives – based on above model following are the primary goals.

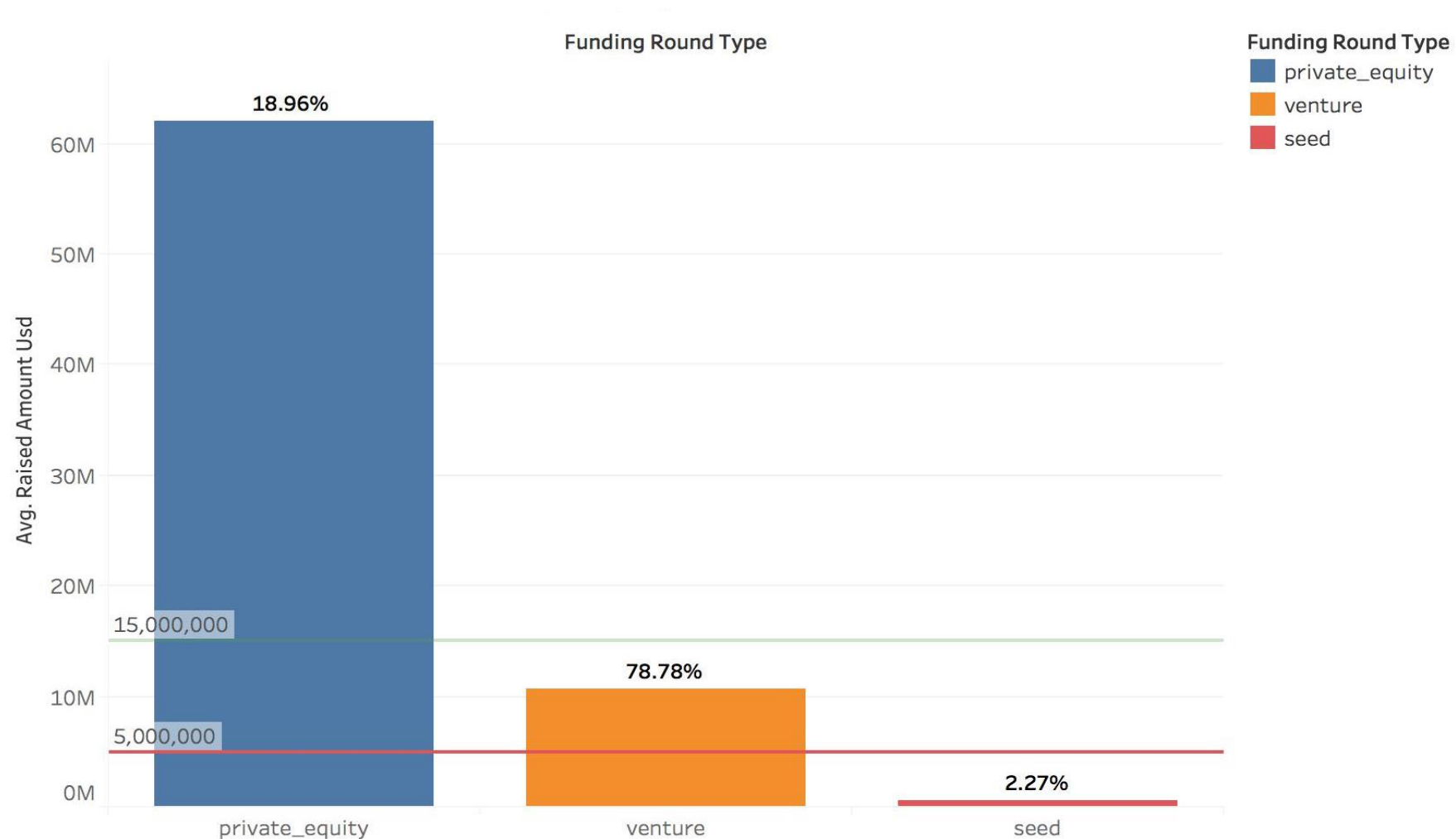
- Investment type analysis: ability to identify best suited categories for the investment.
- Country Analysis: list out countries having most investment in the past.
- Sector Analysis: understanding investment distribution among sectors.

Result Analysis

Based on the model created and studied, below are the representations done. Spark Funds can easily deduce required results from the mode.

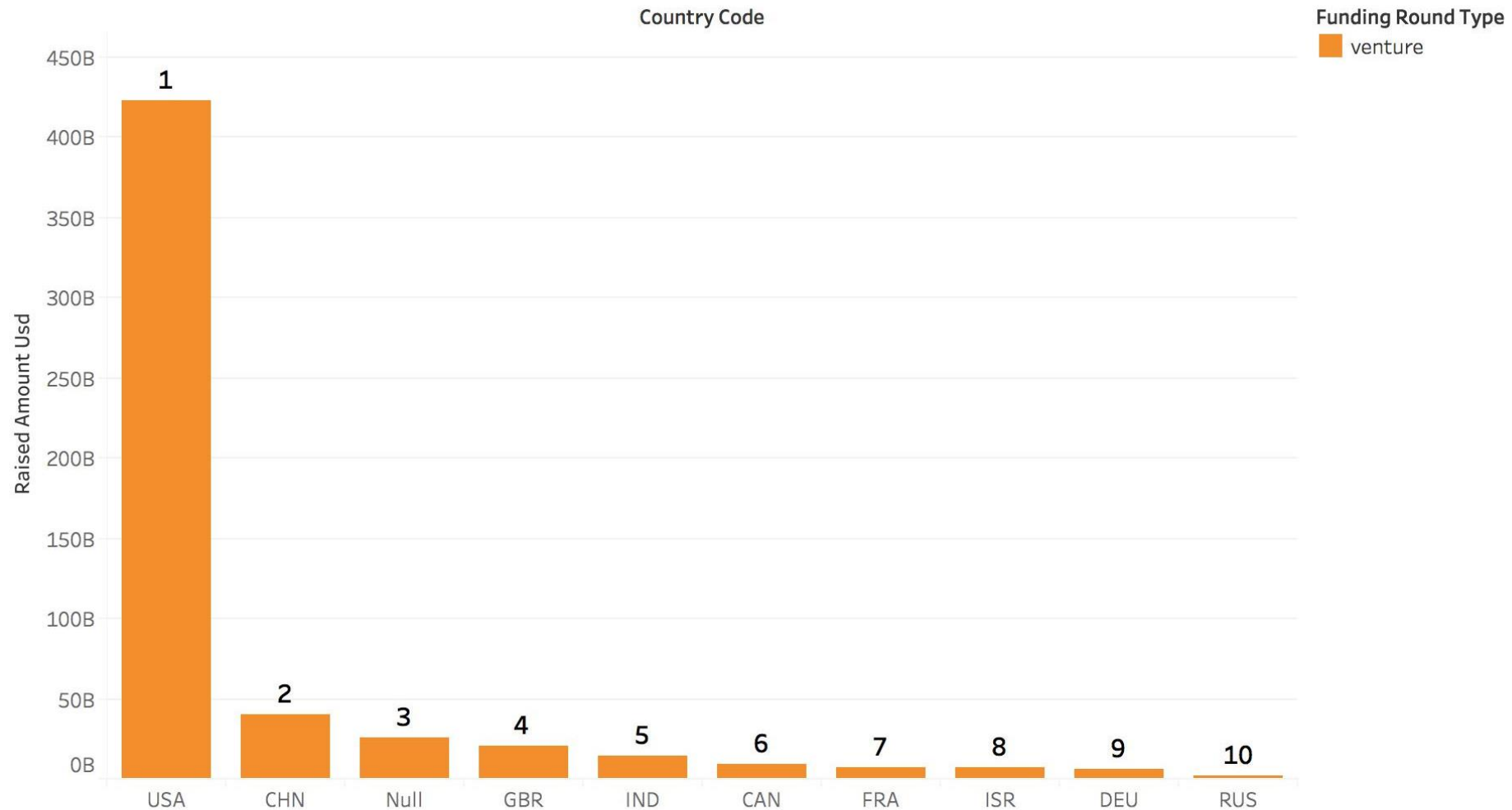
- Identify unique companies and handle NA values for raised_amount_usd
- List average funding for each of investment types. (Venture, Angel, Seed and Private Equity type).
- Country-wise funding in sectors for any chosen investment type. List top 9 countries for investment type chosen.
- List top 3 English speaking countries for identifying investment-friendly options.
- Sector-wise investment in each country. Total number of investments and total value of investment in USD.
- Top, second and third best sectors based on count of investments.
- Number of investments in top, second and third best sectors.
- Which companies received highest investment in top and second best sectors.
- Graphical representation done in Tableau and displayed in next sections of the presentation.

Investments based on Funding Type (FT)



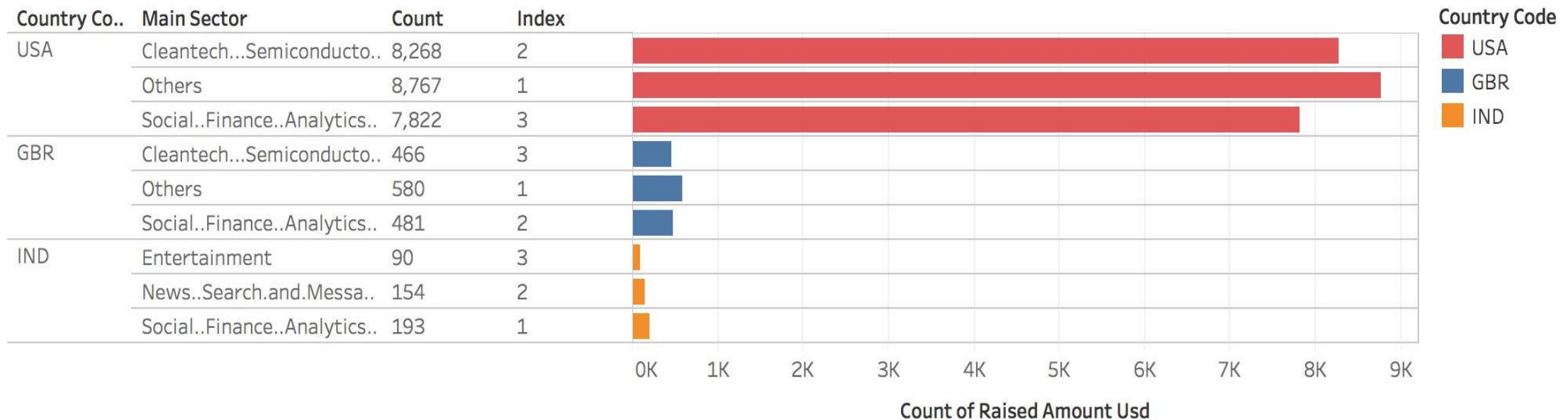
Average of Raised Amount Usd for each Funding Round Type. Color shows details about Funding Round Type. The marks are labeled by % of Total Raised Amount Usd. The view is filtered on Funding Round Type, which keeps private_equity, seed and venture.

Total amount of investments among top 9 countries



Sum of Raised Amount Usd for each Country Code. Color shows details about Funding Round Type. The marks are labeled by Rank based on Investment. The view is filtered on Country Code and Funding Round Type. The Country Code filter has multiple members selected. The Funding Round Type filter keeps venture.

Number of Investments in top 3 sectors among preferred countries



Count of Raised Amount Usd for each Count and Index broken down by Country Code and Main Sector. Color shows details about Country Code. The data is filtered on Funding Round Type, average of Raised Amount Usd and Index. The Funding Round Type filter keeps venture. The average of Raised Amount Usd filter ranges from 5,000,000 to 15,000,000. The Index filter ranges from 1 to 3. The view is filtered on Country Code, which keeps GBR, IND and USA.

Inferences

Based on analysis, Spark fund should invest in the following countries:

Invest in countries	Investment Sectors
USA	<ul style="list-style-type: none">• Others• Cleantech/Semiconductors• Social/Finance/Analytics/Advertising
GBR (Great Britain)	<ul style="list-style-type: none">• Others• Social/Finance/Analytics/Advertising• Cleantech/Semiconductors
India	<ul style="list-style-type: none">• Social/Finance/Analytics/Advertising• News, Search and Messaging• Entertainment